EU PROFICIENCY TEST
EUPT-SRM12, 2017

Residues of Pesticides requiring Single Residue Methods

Test Item:

Strawberry Purée

Final Report

Supplementary Information on Analytical Methods

S-1 Methods used by the participating laboratories (ordered by Lab-Codes)

Compulsory analytes S-2

Optional analytes S-110

Additional analytes S-162

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

2,4-D (free acid) (Assigned value = 0.079 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.068	-0.5	0.01	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS		No					LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.0692	-0.5	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables	Yes, other IS	1	92.3 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Scope	0.082	0.2	0.01	10	ambient	Ultra turrax, 1 min	MeOH, H_2O, 40 ml MeOH/water (90/10)	None	No	None	Filtration, büchner filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Oxfendazole	2	88.2 % | 1	EUPT-blank		LC-MS/MS (QQQ)		40 ml extraction mixutre, ultraturrax 1 min, büchner filtration, volume ajusted at 60 ml. Concentrated 5 times before injection
4		Yes	Comm.	0.0742	-0.2	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		102 % | 1	EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	2 MRM; No hydrolysis step	QuEChERS – Citrate buffered (EN 15662), Modification: No dSPE clean-up; free acid only - No hydrolysis step
6	x	Yes	Scope	0.08	0.1	0.01	10	slightly frozen	Man. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	No		99.8 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
7		Yes	Scope	0.073	-0.3	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate Buffer pH 5.5	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, MCPA-D_6	1		slope of std. add. to sample portions		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662)
8		Yes	Comm.	0.089	0.5	0.01	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		92 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
9		Yes	Scope	0.0581	-1	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	Tomato	No		91 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean up
10		No	No	0.067	-0.6	0.01	10	slightly frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Freezing out, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	Yes, Nicarbazin	1	87 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No purification by d-SPE was applied
11		Yes	No	0.043	-1.8	0.01	10	cold	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	1	71 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
12		Yes	Scope	0.075	-0.2	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation		Std. spiked to Pure SOLVENT		Yes, other IS	1	100 % |			LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
13	x	Yes	Scope	0.064	-0.7	0.01	10	deep frozen	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$	No		Centrifugation, 5 min at 5000rpm		Std. spiked to MATRIX Extract, 3 points	EUPT-Blank	No		80.5 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Waters micra	QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered), Modification: Extr. in Acetonitril, adding salts, centrifugation, put into the vial, dilution 1:1 with mobile phase
14		Yes	No	0.063	-0.8	0.01	10	deep frozen	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, MCPP-D_3	1	83 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No clean up
15		Yes	No	0.075	-0.2	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	1	100 % | 2	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
16	x	Yes	Comm.	0.056	-1.2	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Carbofuran-D_3	2	70 % | 2	EUPT-blank	0.02 and 0.10 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
17	x	Yes	No	0.0807	0.1	0.01	10	just thawed	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		94 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | 2,4-D (free acid)

2,4-D (free acid) (Assigned value = 0.079 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
18		Yes	Scope	0.074	-0.2	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, but only to check Extr. efficiency	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	0.088	0.5	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Liq.-Liq. Part., Dessication with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1				LC-MS/MS (QQQ)	219/161, 219/125	QuEChERS – Citrate buffered (EN 15662)
20		Yes	Comm.	0.0746	-0.2	0.002	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	2	98 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered)
21		Yes	Scope	0.08	0.1	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering		Centrifugation		Std. add. to extract ALIQUOTS		Yes, Bentazone-d6	1	93 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.09	0.6	0.05	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaOAc/MgSO_4$	No		Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	2				LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: No PSA
24		Yes	Scope	0.083	0.2	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		99 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
25		Yes	No	0.080	0.1	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		104 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
26		No	No	0.079	0.0	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1	90 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
27		No		0.0772	-0.1	0.005	10	deep frozen	Ultra turrax, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
28	x	Yes	Scope	0.071	-0.4	0.01	10	slightly frozen	Mech. shaking, 30 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			None		Std. spiked to MATRIX Extract	EUPT-Blank	No		75 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
29	x	No	No	0.0785	0.0		10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, EtOAc for extraction acidified (1 % HAc)		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		92 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: No addition of buffer and use of acifified EtAc (1 % HAc); Not included in F&V scope
30	x	Yes	Comm.	0.076	-0.1	0.01	10	deep frozen	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×		Freezing out		Procedural calibr. (Corr. for Recov.)	Other Bank			100 % |			LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
32		Yes	Scope	0.081	0.1	0.005	10	cold	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, by buffering and acid (FA) addition	None	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
33	x	Yes	Scope	0.080	0.1	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank	Multiple cali.	LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662), Modification: injection of Extract 1 - No dSPE
34		Yes	Scope	0.077	-0.1	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	lettuce	Yes, Isoprotu-ron-D_6	1	90 % | 2	QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	0.0846	0.3	0.01	10	deep frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, 2,4-D-D_3	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12)), Modification: centrifugation step at -5°C

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

2,4-D (free acid) (Assigned value = 0.079 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
38		No	No	0.072	-0.3	0.01	10	slightly frozen	Man. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1	122 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
39		Yes		0.086	0.4	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		98.4 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12))
41		Yes	Scope	0.081	0.1	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	Yes, 1×, 4,5	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	1	123 % | 1	other strawberry	other strawberry	LC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth)
42		Yes	Scope	0.077	-0.1	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering	None	Centrifugation, Filtration		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Nicarbazin	1	86 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
44	x	No	Scope	FN	-3.5	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$	No	Alkaline/Acidic hydrolysis prior to or during extraction, derivatization with trimethylsulfonium hydroxide (0.2 mol/l)	$MgSO_4$/C18		Std. spiked to MATRIX Extract	EUPT-Blank	No		70 % | 2	EUPT-blank	0.1 mg/kg	GC-MSD	SIM mode	Alkaline hydrolysis prior to or during extraction, derivatisation
45		Yes	Comm.	0.0691	-0.5	0.01	10	just thawed	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
46		Yes	No	0.085	0.3	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT		Yes, MCPP-D_3	2	107 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
47		Yes	Comm.	0.076	-0.1	0.01	10	deep frozen	Ultra turrax, 1 min	MeOH	None	No		Dessication with Na_2SO_4, Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Nicarbazin	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: without acid extraction
48		Yes	Scope	0.084	0.3	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Mecoprop-D_3	1	102 % | 2	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.0812	0.1	0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	No		77.3 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No clean up
50		Yes	Scope	0.085	0.3	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT		No		99 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No clean up
51		Yes	No	0.0725	-0.3	0.01	10	deep frozen	Mech. shaking, 25 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12))
52		Yes	Comm.	0.069	-0.5	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Carbendazim-D_3, but Not IS corrected, recovery only	1	94 % | 3	EUPT-blank	0.02; 0.1 and 0.5 mg/kg	LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.073	-0.3	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.069	-0.5	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		82.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

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Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | 2,4-D (free acid)

2,4-D (free acid) (Assigned value = 0.079 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
58		Yes	Scope	0.0617	-0.9	0.01	10	slightly frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		89.8 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
61		No	No	0.075	-0.2	0.01	10	deep frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank	rec. to check meth. performance	LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662)
62	x	No	No	0.071	-0.4	0.05	10	ambient	Man. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Trimethyl pheNoxy HOAc	2	51 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No PSA Clean-up
63		Yes	Scope	0.082	0.2	0.01	10	ambient	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	0.082	0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	Yes, 1×, ACN w. 1 % FA		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	2	102 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
66	x	Yes	No	0.0765	-0.1	0.01	5	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		90 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
67	x	Yes	Scope	0.102	1.2	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. add. to extract ALIQUOTS		Yes, TPP	2	101 % | 1	EUPT-blank	0.3 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
68		No	No	0.080	0.1	0.01	10	deep frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No					LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
69		Yes	No	0.089	0.5	0.01	10	deep frozen	Ultra turrax, 30 min	MeOH, H_2O, 10water/20MeOH	None	Yes, 2×	Alkaline hydrolysis prior to or during extraction	SEP-Column (Extrelut)		Std. spiked to MATRIX Extract	EUPT-Blank	No		100 % | 4	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: alkaline hydrolysis
70		No	Scope	0.056	-1.2	0.01	10	just thawed	Man. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		96.6 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.791	36.2	0.01	10	ambient	Ultra turrax, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
72		Yes	Comm.	0.094	0.8	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Isoprotu-ron-D_6	1	112 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12))
74		No	No	0.0836	0.2	0.01	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Pirimicarb-D_6	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time
75	x	Yes	Scope	0.128	2.5	0.01	10	deep frozen	Man. shaking, 15 min	ACN	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		95 % | 4	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: slightly acidified
76		Yes	Scope	0.084	0.3	0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank				QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
78		Yes	Comm.	0.073	-0.3	0.01	5	deep frozen	Ultra turrax, 2 min	MeOH, CH_2Cl_2	NaCl	No	None	Liq.-Liq. Part., ChemElut pH 4.5		Std. spiked to MATRIX Extract	EUPT-Blank	No		104.8 % | 1	EUPT-blank	0.05 mg/kg	LC-MS/MS (QQQ)	ESI-neg	Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: buffered ChemElut, pH 4.5

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

2,4-D (free acid) (Assigned value = 0.079 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
79		Yes	Scope	0.070	-0.4	0.01	10	deep frozen	Ultra turrax, 30 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank			60 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered)
81	x	No	Comm.	0.0769	-0.1	0.01	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, 1 % FA in MeOH		Centrifugation, Filtration		Std. spiked to MATRIX Extract		No		101.2 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Different L-Chromatography conditions - in house LC methods
83	x	Yes	Scope	0.980	45.8	0.01	10	deep frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$	Yes, 1×, 100 uL phosphoric acid	None, None	None, None		Other		No		82 % | 3	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	Extr. with CH3CN followed by $MgSO_4$, NaCl	extraction with CH3CN followed by $MgSO_4$, NaCl; None
84		Yes	Comm.	0.075	-0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.083	0.2	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	None	None		Std. spiked to MATRIX Extract		Yes, Nicarbazin	1	95 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.075	-0.2	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Bentazone-d6	1	84 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
89		No	No	0.102	1.2	0.01	10	deep frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		99.2 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
90		No	No	0.086	0.4	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		105 % | 1	EUPT-blank	0.010 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17); longer experience (more than 2 years) with aNother method
91	x	Yes	No	0.120	2.1	0.01	10	ambient	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		113.1 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
92		Yes	Comm.	0.0905	0.6	0.01	10	deep frozen	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
93		Yes	Comm.	0.0722	-0.3	0.01	10	cold	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, 2,4,6-(Trimethyl-pheNoxy)-HOAc	1	90 % | 1	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
94		Yes	Scope	0.076	-0.1	0.01	10	deep frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 200 µl of 5 N NaOH		Centrifugation, Filtration		Std. spiked to MATRIX Extract	Other Bank	No	1	87 % | 2	EUPT-blank		LC-MS/MS (QQQ)	1 µl inj.	QuEChERS – Citrate buffered (EN 15662)
95		Yes	Scope	0.078	0.0	0.01	10	slightly frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	Yes, 1×, Extr. with Acetonitril + 1 % FA	None	Centrifugation		Std. add. to extract ALIQUOTS	EUPT-Blank	No		98 % | 2	other blank	PT-Blank-Matrix	LC-MS/MS (QQQ)	neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
96	x	Yes	Scope	0.071	-0.4	0.01	10	just thawed	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Centrifugation, Filtration		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, 2,4-D-D_3	1				LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
97		Yes	Comm.	0.087	0.4	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/ freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1	93 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
98	x	Yes	Comm.	0.069	-0.5	0.01	10	cold	Man. shaking, 1 min	ACN		No				Std. spiked to MATRIX Extract	EUPT-Blank	No		87 % | 1	EUPT-blank		LC-MS/MS (QQQ)	LC-MS/MS	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | 2,4-D (free acid)

2,4-D (free acid) (Assigned value = 0.079 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
99		Yes	Comm.	0.079	0.0	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1	90 % | 1	EUPT-blank	0.05 mg/kg to EUPT Blank	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	0.064	-0.7	0.01	10	cold	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
103	x	Yes	Scope	0.0782	0.0	0.005	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None	None		Std. spiked to MATRIX Extract	None (pure Water/Solvent)	No		92 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	Mini-Luke-Type (Acetone DCM-PE)
104		No	No	0.0907	0.6	0.01	10	cold	Mech. shaking, 25 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		104 % | 3	EUPT-blank		LC-MS/MS (QQQ)	ESI	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
106		No	No	0.100	1.1	0.01	10	ambient	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No clean up
107	x	Yes	No	0.112	1.7	0.01	10	cold	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, 1st with H_2SO_4, 2nd with NaOH	Acidic hydrolysis prior to or during extraction	Freezing out		Std. spiked to MATRIX Extract		Yes, Nicarbazin	1	120 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12))
108		Yes	Scope	0.087	0.4	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, 4-chloro-3,5-dimethylphe-Noxy-HOAc	1	75 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
109		Yes	Scope	0.075	-0.2	0.01	10	ambient	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % FA	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	1	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.10 mg/kg	LC-MS/MS (QQQ)	QQQ 6495 ifunnel Agilent	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
113		Yes	Scope	0.085	0.3	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank	Yes, Desmetryn	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered)
115		Yes	Scope	0.059	-1.0	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Yes, TPP	1	119 % | 3	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		Yes	No	0.0833	0.2	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Filtration		Std. add. to extract ALIQUOTS		Yes, Tris(1,3-dicloroisopropyl) phosphate	1	95 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	2 MRM; ESI-	QuEChERS – Citrate buffered (EN 15662), Modification: only first step; No purification with PSA
117		Yes	Comm.	0.0918	0.7	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. add. to extract ALIQUOTS		Yes, Nicarbazin	1				LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
124	x	Yes	Scope	0.0766	-0.1	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Pet. Ether	None	No, No	None, None	Dessication with Na_2SO_4, Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		106.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
125		No	No	0.094	0.8	0.01	10	just thawed	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate-Buffer mix		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)						LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean-up step
126		No	No	0.059	-1.0	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)			89.7 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.073	-0.3	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	orange	No		102 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: The laboratory employes this method like reference method for the extraction

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | 2,4-D (free acid)

2,4-D (free acid) (Assigned value = 0.079 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
128		Yes	No	0.0658	-0.7	0.02	15	just thawed	Ultra turrax, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Filtration, RC filter 0.2 um		Std. spiked to MATRIX Extract; No difference between sample and blank extraction, matrix-matched calibration curve r^2:0.999	EUPT-Blank	No		98 % | 2	EUPT-blank	0.1 mg/kg: 15g sample with 300 µl , 5ppm 2,4-D std.solution, extraction	LC-MS/MS (QQQ)	ESI-neg, MMI, 2 transitions	Mini-Luke-Type (Acetone DCM-PE)
129		Yes	Scope	0.086	0.4	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		92 % | 4	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
130		Yes	Scope	0.101	1.1	0.01	10	slightly frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			Centrifugation		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, Diuron-D_6	1	127 % | 3	EUPT-blank		LC-MS/MS (QQQ)	neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
3rd-131		No	No	0.085	0.3	0.01	10	just thawed	Man. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	$NaCl/MgSO_4$		None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Dichlorprop-D_6	1	95 % | 3	QC validation data	level; 0.010; 0.02; 0.05 and 0.10 mg/kg	LC-MS/MS (QQQ)	LC/MS Triple Quad 6410b Agilent Technologies	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
3rd-132		Yes	Scope	0.083	0.2	0.01	10	cold	Mech. shaking, 10 min	ACN	None		None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TDCPP	2	89 % | 2	slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-133		Yes	Comm.	0.0797	0.1	0.01	5	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			Dispersive-SPE (ODS/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, 2,4-D-D_6	1	106.1 % | 2	EUPT-blank	Recovery based on matrix blank 0.01 mg/kg.	LC-Orbitrap	m/z 218.96212 [M-H]-	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: Quantitative analysis - standard solution five point calibration (after matrix-matched screening analysis)
3rd-136		Yes	Comm.	0.077	-0.1	0.02	10	deep frozen	Man. shaking, 3 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$		None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		90.3 % | 3	EUPT-blank	compound used for spiking	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: Extracted by 10 ml of 1 % FA in acetonitilre and of 4 g $MgSO_4$ and 1 g NaCl for partitioning. No cleanup was conducted.
3rd-137		No	No	0.087	0.4	0.01	15	ambient	Mech. shaking, 10 min	ACN, No	$NaCl/MgSO_4$		None, No	None, Not clean up		Std. spiked to MATRIX Extract, strawberry and water 1:1	EUPT-Blank	No		73 % | 3	EUPT-blank	None	LC-MS/MS (QQQ)	injection volume: 20 uL	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12)), Modification: Not add NaCl neither internal standard. The organic mobile phase is methaNol; Experience is less than 6 months
3rd-139		No	Comm.	0.208	6.6	0.01	10	deep frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$		None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1				LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Captan (parent)

Captan (parent) (Assigned value = 0.085 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.055	-1.4	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to extract ALIQUOTS		Captan	No					GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.0881	0.1	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, other IS	1	92.5 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	No	0.066	-0.9	0.02	50	ambient	Mech. shaking, 2 min	Acetone, 100 ml Acetone	None	No	Liq.-Liq.-Part., add 30 ml NH_4Cl(1 %) + o-Pacid(1 %), liq-liq (ether)		Std. spiked to MATRIX Extract	EUPT-Blank		No		75 % | 1	EUPT-blank		GC-MS/MS (QQQ)		100 ml acetone, mechanical shaking, filtration, add of 30 ml acid ortho-P to 30 ml of the extract, wait 30 min. Liq-liq, filtration with Na_2SO_4
4		Yes	Commodity	0.0723	-0.6	0.01	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, $NaHCO_3$	GPC, Envirosep HPGPC column		Std. spiked to MATRIX Extract	other organic strawberry	Captan	Yes, triflura-lin D_{14}	2	94 % | 1	other organic strawberry	0.02 mg/kg, org. strawberry	GC-MS/MS (QQQ)	3 MRM	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
6	x	Yes	No	0.115	1.4	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank		No		45.6 % | 3	EUPT-blank	(42.5 - 43.6 - 50.7)%	GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662), Modification: ACN extract evaporated and reconstituted with isooctane:toluene (90:10); Note: the result is corrected by recovery
7		Yes	Scope	0.079	-0.3	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer pH 5.5	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		Yes, Captan-D_6	1				GC-TOF	EI	Quantification of Residues of Folpet and Captan in QuEChERS Extracts Version 3.1 (last update: 06.04.17)
9		No	No	0.011	-3.5	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No		59 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
12		Yes	No	0.077	-0.4	0.01	10		Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to Pure SOLVENT		Captan	Yes, other IS	1	88 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
13	x	Yes	Scope	0.131	2.2	0.02	18	deep frozen	Ultra turrax, 3 min	EtOAc, 100 ml	None	No	Centrifugation, GPC, 5 min at 4000rpm		Std. spiked to MATRIX Extract, 3 points	EUPT-Blank		No		85.6 % | 3	other strawberry	other strawberry	GC-(μ) ECD	Agilent 6890	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
14		Yes	No	0.080	-0.2	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan	Yes, Atrazine-D_5	1	89 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
15		Yes	No	0.081	-0.2	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		Yes, TPP	3	100 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
17	x	Yes	Scope	0.0872	0.1	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN, EtOAc	None	No	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Phenan-threne-D_{10}	2	101 % | 2	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered), Modification: RP-SPE cleanup step
18		Yes	Scope	0.098	0.6	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, Captan-D_6	1	95 % | 2	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	0.090	0.2	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Liq.-Liq. Part., Dessication with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Captan-D_6	1				GC-TOF		QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	0.0858	0.0	0.005	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	Yes, 1×, addition of H_2SO_4, pH 1	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3	88 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered)
21		Yes	Scope	0.084	0.0	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 2×, 1) Buffering; 2) FA	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS		Captan	Yes, ILIS	1	98 % | 1	EUPT-blank		GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.090	0.2	0.015	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaOAc/MgSO_4$		Centrifugation			None (pure Water/Solvent)		Yes, Captan-D_6	2	90 % |					QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
23		Yes	No	0.025	-2.8	0.022	15	just thawed	Man. shaking, 30 min	EtOAc	Other	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		-% | 2			GC-MSD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
24		Yes	Scope	0.062	-1.1	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No		82.7 % | 1	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Captan (parent)

Captan (parent) (Assigned value = 0.085 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
25		Yes	No	0.086	0.0	0.04	10	slightly frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Isoproturon-D_6	1	98.1 % | 1	EUPT-blank		LC-TOF		QuEChERS – Citrate buffered (EN 15662)
26		No	No	0.075	-0.5	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan	Yes, Anthracene	1	100 % | 2	slope of std. add. to sample portions		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
29	x	Yes	Commodity	0.062	-1.1	0.05	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		79 % | 1	EUPT-blank		GC-(μ) ECD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789); Subcontracted as per routine
30	x	Yes	Scope	0.103	0.8	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×	Freezing out, Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank				100 % |			LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
31		Yes		0.0904	0.3	0.01	10	just thawed	Mech. shaking, 2 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)				80 % | 2			GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
32		Yes	Scope	0.094	0.4	0.01	10	cold	Mech. shaking, 2 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 2×, by buffering and acid (FA) addition	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan	Yes, Folpet-D_4	2	100 % |			GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
33	x	Yes	Scope	0.082	-0.1	0.01	10	just thawed	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, Captan-D_6	1	91 % | 1	EUPT-blank	Multiple cali.	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	0.104	0.9	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan	Yes, Captan-D_6	1		EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: centrifugation step at -5°C
37		No	No	0.083	-0.1	0.01	10	deep frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No			QC validation data		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
38		Yes	No	0.063	-1.0	0.02	15	just thawed	Ultra turrax, 15 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Triphenylphosphine	1	101 % | 1	EUPT-blank		GC-(μ) ECD	confirmed br GC-Ion trap (MS/MS)	Mini-Luke-Type (Acetone DCM-PE)
39		Yes		0.090	0.2	0.02	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, bromophos	1	101 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12)), Modification: clean up
41		Yes	Scope	0.050	-1.6	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan	Yes, TPP	1	62 % | 1	other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	0.080	-0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, Buffering	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan	Yes, Chlorpyrifos-D_{10}	1	126 % | 1	EUPT-blank		GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662)
44	x	No	Scope	0.085	0.0	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TDCPP	1	78 % | 2	EUPT-blank	0.1 mg/kg	GC-MSD	SIM mode	QuEChERS – Citrate buffered (EN 15662), Modification: acidified ACN(1 % HOAc)
45		Yes	No	0.107	1.0	0.02	10	deep frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$	Yes, 1×, Add 100 µL H_2SO_4 (conc) to sample homogenate	None		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, TPP	1	44 % | 2	other blank	0.05 mg/kg	GC-MS/MS (QQQ)	EI pos	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12))
46		Yes	No	0.0748	-0.5	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT, Rec. Factor		Captan and THPI (separately)	Yes, other IS	2	48 % | 1	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
47		Yes	No	0.063	-1.0	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	NaOAc/$MgSO_4$	No	Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME		Yes, Ethylparathion-D_{10}	2	78 % | 1	EUPT-blank		GC-(μ) ECD		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Captan (parent)

Captan (parent) (Assigned value = 0.085 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
48		Yes	Scope	0.0745	-0.5	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	No	1	80 % | 2	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.0436	-1.9	0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No		104.8 % | 1	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662); analysed by GC-ECD because of GC-MS/MS malfunction
50		Yes	Scope	0.080	-0.2	0.02	10	deep frozen	Mech. shaking, 30 min	EtOAc	None	No	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-28	2	104 % | >5	EUPT-blank		GC-(μ) ECD		in house method
52		Yes	Commodity	0.137	2.5	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, TPP, but Not IS corrected, recovery only	1	100 % | 1	EUPT-blank	0.5 mg/kg	GC-MS/MS (QQQ)	Addition of Analytical Protect. before measure-ment	QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.072	-0.6	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan	Yes, ILIS	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
56		Yes	Scope	0.055	-1.4	0.01	10	cold	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No		91.8 % | 2	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.073	-0.6	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No		70 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	No	0.106	1.0	0.01	10	slightly frozen	Man. shaking, 1 min	EtOAc	Other	No	Dispersive-SPE (other); $MgSO_4$/C18/PSA		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, TDCPP	1	106.5 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Not buffered, partitioning salt: Na_2SO_4 (10 g)
61		No	No	0.0815	-0.2	0.005	10	deep frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.), Other	EUPT-Blank	Captan	Yes, Captan-D_6	1		EUPT-blank	rec. to check meth. per-formance	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
62	x	No	No	0.062	-1.1	0.05	10	ambient	Man. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	2	86 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No PSA Clean-up
63		Yes	Scope	0.050	-1.6	0.01	10	ambient	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sam-ple PORTIONS (Corr. for Recov.)								LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
66	x	Yes	No	0.0842	0.0	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, Aldrin	2	77 % | 2	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
67	x	Yes	Scope	0.096	0.5	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None		Std. add. to sam-ple PORTIONS (Corr. for Recov.)			Yes, PCB-209	2	128 % | 1	EUPT-blank	0.2 mg/kg	GC-(μ) ECD		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: solvent exchange before ECD analysis
69		Yes	No	0.0843	0.0	0.02	10	slightly frozen	Ultrasonic bath, 30 min	Acetone	None	No	Clena up 1 (SDVB), followed by SPE-column (ion exchange)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3	79 % | 3	EUPT-blank		GC-MSD		acetone extraction, water adition, SPE (SDVB, PSA)
70		No		0.020	-3.1	0.01	10	just thawed	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (other); PSA/C18/$MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Captan	Yes, TDCPP	1	91.8 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
72		Yes	No	0.137	2.5	0.05	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None		Std. spiked to MATRIX Extract	organic let-tuce/pepper	Captan	Yes, Chlorpy-rifos-D_{10}	1	122 % | 2	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for DithiaNon (SRM-12))
73	x	No	No	0.131	2.2	0.02	10	slightly frozen	Ultrasonic bath, 10 min	Acetone, CH_2Cl_2, petroleum ether	None	No			Std. spiked to MATRIX Extract	EUPT-Blank				80 % | 3	EUPT-blank		GC-(μ) ECD		Mini-Luke-Type (Acetone DCM-PE)
74		Yes	Commodity	0.0741	-0.5	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Parathion-d10	1	83 % | 1	EUPT-blank		GC-(μ) ECD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Captan (parent)

Captan (parent) (Assigned value = 0.085 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
75	x	Yes	Scope	0.122	1.7	0.01	10	deep frozen	Mech. shaking, 15 min	EtOAc, C_6H_{12}, mix 1/1	None	No	GPC		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Ditalimfos	2	88 % | 3	EUPT-blank		GC-MSD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: extr. solvent (etac) replaced with chex/etac 1/1 mixture
76		Yes	Scope	0.100	0.7	0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)	Yes, Captan-D_6	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
77		No	No	0.08	-0.2	0.01	15	slightly frozen	Mech. shaking, 15 min		NaCl/$MgSO_4$	No			Std. add. to sample PORTIONS (Corr. for Recov.)		Captan			91 % | 3	slope of std. add. to sample portions	0.05; 0.10; 0.20 mg/kg	GC-Ion Trap		EtOAc + 1 % HOAc
78		Yes	Commodity	0.092	0.3	0.01	10	deep frozen	Ultra turrax, 3 min	Acetone, C_6H_{12}, EtOAc, C_6H_{12}/EtOAc 1:1	NaCl	No	GPC, silica column		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No		92.1 % | 1	EUPT-blank	0.08 mg/kg	GC-MS/MS (QQQ)		S-19 (§64 LFGB L00.00-334)
83	x	Yes	Scope	0.080	-0.2	0.01	50	deep frozen	Man. shaking, 5 min	EtOAc	None	No, None	None		Std. add. to extract ALIQUOTS			No		80 % | 3	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)	Extr. 200 ml EtOAc	extraction EtOAc 200 ml, Vol final 10 ml; None
84		Yes	Commodity	0.080	-0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)	Yes, ILIS	1	95 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.193	5.1	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	SPE-column (C18), Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract		Captan	Yes, Terbutryn-D_5	1	89 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.088	0.1	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Chlorpyriphos-Me-D_6	1	75 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		No	No	0.090	0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	Other Bank	Captan	No					GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: injection was performed in toluene instead of acetonitrile (solvant was exchanged); difficulties for analysing it
91	x	Yes	Commodity	0.088	0.1	0.01	10	ambient	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No		99.6 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered)
92		Yes	Commodity	0.0852	0.0	0.01	10	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	No					GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
93		Yes	Commodity	0.0471	-1.8	0.01	10	cold	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, TPP	1	83 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
94		Yes	Scope	0.078	-0.3	0.02	50	deep frozen	Mech. shaking, 5 min	MeOH, CH_2Cl_2, EtOAc/C_6H_{12}		No	GPC		Std. spiked to MATRIX Extract	Other Bank	Captan	Yes, Mirex	2	82 % | 2	EUPT-blank		GC-(μ) ECD	1 μl inj.	S-19 (§64 LFGB L00.00-334)
95		Yes	Scope	0.149	3.0	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, ascorbic acid before GC	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS, Other	strawberry purée	Captan	Yes, Captan-D_6	2	92 % | 1	EUPT-blank		GC-MS/MS (QQQ)	analytical column: HP 5-MS	QuEChERS – Citrate buffered (EN 15662), Modification: at the end of procedure the extract is treated with ascorbic acid as analytical protectant instead of FA
96	x	Yes	Scope	0.099	0.7	0.01	10	just thawed	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation, In addition filtration		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		Yes, Aldrin	1				GC-MSD	technical problems!	QuEChERS – Citrate buffered (EN 15662)
97		Yes	Scope	0.086	0.0	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, citrate buffer	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Captan-D_6	1	94 % | 2	slope of std. add. to sample portions	near the result	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No PSA for CleanUp
98	x	Yes	Commodity	0.0213	-3.0	0.01	10	cold	Man. shaking, 1 min	ACN			Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, THPI	1	75 % | 1	EUPT-blank		GC-MS/MS (QQQ)	GC-MS/MS	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Captan (parent)

Captan (parent) (Assigned value = 0.085 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
99		Yes	Commodity	0.188	4.9	0.02	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, TPP	1	103 % | 5	QC validation data	0.05 mg/kg to blueberry	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	0.089	0.2	0.01	10	cold	Mech. shaking, 30 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Captan-D_6	1					GC-CI-MS	Single Residue Methods, Analyses of Captan and Folpet via QuEChERS and GC-MS(CI)
103	x	Yes	Scope	0.105	0.9	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None		Std. spiked to MATRIX Extract	None (pure Water/Solvent)	Captan	No		89 % | 1	EUPT-blank	40 µg/kg	GC-(µ) ECD	30 m x 0,25 mm i.d., VF-5ms, 0,25 µm (Agilent)	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	Scope	0.0818	-0.1	0.01	10	cold	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No		94 % | 3	EUPT-blank		GC-(µ) ECD		QuEChERS – Citrate buffered (EN 15662)
105	x	Yes	Scope	0.120	1.7	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration, Filtration through anhydrous Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No			EUPT-blank		GC-(µ) ECD	GCMSMS confirmation (as THPI)	Mini-Luke-Type (Acetone DCM-PE)
106		No	No	FN	-3.5	0.01	10	ambient	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No clean up
107	x	Yes	Commodity	0.063	-1.0	0.01	10	cold	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Freezing out		Std. spiked to Pure SOLVENT			Yes, TPP	1	93 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
108		Yes	Scope	0.450	17.2	0.01	10	deep frozen	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	1	91 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
109		Yes	No	0.076	-0.4	0.01	10	ambient	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan	Yes, Captan-D_6	1	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	Chemical Ionization QQQ Quantum Thermo	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
110		No	No	0.313	10.7	0.01	15	cold	Mech. shaking, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation		Std. spiked to MATRIX Extract			No		81 % | 5	EUPT-blank		GC-Ion Trap		Mini-Luke-Type (Acetone DCM-PE)
112		No	No	0.042	-2.0	0.01	10	ambient		ACN, C_6H_{12}	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to MATRIX Extract			No			EUPT-blank		GC-Ion Trap		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
113		Yes	Scope	0.063	-1.0	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank		Yes, Desmetryn, Mirex	1	94 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (Not buffered)
115		Yes	Scope	0.090	0.2	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, PCB-153	1	92 % | 3	EUPT-blank		GC-(µ) ECD		Mini-Luke-Type (Acetone DCM-PE)
116		Yes	No	0.0792	-0.3	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. add. to extract ALIQUOTS		Captan	Yes, Captan-D_6	2	90 % | 1	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)	2 MRM; EI	QuEChERS – Citrate buffered (EN 15662)
117		Yes	Commodity	0.126	1.9	0.01	10	ambient	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to extract ALIQUOTS			Yes, TPP	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
120		Yes		FN	-3.5	0.2	10	deep frozen	Man. shaking, 30 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	cucumber		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
124	x	Yes	Scope	0.095	0.5	0.01	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Pet. Ether	None	No, No	Dessication with Na_2SO_4, Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		No		106.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
125		No	No	0.137	2.5	0.05	10	just thawed	Mech. shaking, 15 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan						GC-MS/MS (QQQ)	Cool On Column	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: 10 g sample + 10 ml EtAc + 8 g $MgSO_4$ + 1.5 g NaCl

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Captan (parent)

Captan (parent) (Assigned value = 0.085 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
126		No	No	0.072	-0.6	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No	GPC		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, TPP	1	103 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.104	0.9	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, Captan-D_6	1	77 % | 1	EUPT-blank		GC-MSD	Bruker 320 - Bruker 450GC	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: The laboratory emploYes this method like reference method for the detection mode (NCI)
129		Yes	No	0.069	-0.8	0.01	15	deep frozen	Mech. shaking, 15 min	15 ml 1 % Hac in MeCN	$NaOAc/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No		70 % | 4	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
130		Yes	Scope	0.089	0.2	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	Centrifugation		Std. add. to extract ALIQUOTS		Captan and THPI (separately)	Yes, Captan-D_6	2				GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
3rd-132		Yes	Scope	0.089	0.2	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-31	2	82 % | 2	slope of std. add. to sample portions		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-133		Yes	Scope	0.0844	0.0	0.01	5	deep frozen	Mech. shaking, 15 min	ACN + 1 % HOAc	$NaOAc/MgSO_4$		Dispersive-SPE (ODS/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, Captan-D_6	1	95.5 % | 2	EUPT-blank	Recovery based on matrix blank 0.05 mg/kg.	LC-Orbitrap	m/z 316.96796 $[M+NH_4]+$	QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Quantitative anlaysis - standard solution five point calibration (parallel quantitative analysis by EI-GC-MS/MS and LC-Q-Orbitrap)
3rd-136		Yes	Commodity	0.111	1.2	0.02	10	deep frozen	Man. shaking, 3 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		No		111.5 % | 3	EUPT-blank	compound used for spiking	GC-(μ) ECD		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: Extracted by 10 ml of 1 % FA in acetonitilre and of 4 g $MgSO_4$ and 1 g NaCl for partitioning. cleanup Kit$MgSO_4$ 900 mg, PSA 150 mg
3rd-138		Yes	No	0.265	8.5	0.01	10	just thawed	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank				105 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-139		No	Scope	0.0775	-0.4	0.01	10	deep frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT		Captan	Yes, ILIS	1				GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.086	-1.3	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS		No					GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.120	-0.2	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables	Yes, other IS	1	88.1 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Scope	0.129	0.1	0.01	50	ambient	Mech. shaking, 2 min	Acetone, 100 ml Acetone	None	No	None	Liq.-Liq.-Part., add 30 ml NH_4Cl(1 %) + ortho-Pacid(1 %), liq-liq (ether)		Std. spiked to MATRIX Extract	EUPT-Blank	No		77 % | 1	EUPT-blank		GC-MS/MS (QQQ)		100 ml acetone, mechanical shaking, filtration, add of 30 ml acid ortho-P to 30 ml of the extract, wait 30 min. Liq-liq, filtration with Na_2SO_4
4		Yes	Commodity	0.0956	-0.9	0.01	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, HOAc		GPC, Envirosep HPGPC column		Std. spiked to MATRIX Extract	other organic strawberry	No		77 % | 1	other organic strawberry	0.02 mg/kg, org. strawberry	GC-MS/MS (QQQ)	3 MRM	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: acidified with HOAc. no sodium hydrogen carbonate added
6	x	Yes	No	0.122	-0.1	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		45.3 % | 3	EUPT-blank	(45.8 - 41.8 - 48.2)%	GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662), Modification: ACN extract evaporated and reconstituted with isooctane:toluene (90:10); Note: the result is corrected by recovery
7		Yes	Scope	0.137	0.4	0.01	10	cold	Mech. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorpyrifos-D_{10}	1				GC-MSD	NCI	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
9		Yes	No	0.315	6.1	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$	Yes, 1×	None	None		Std. spiked to MATRIX Extract	cucumber	No		129 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
10		No	No	0.290	5.3	0.01	10	slightly frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$	Yes, 1×, pH 1 with 100 µL H_2SO_4 5N	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	Yes, PCB-198	1	116 % | 1	EUPT-blank		GC-MS/MS (QQQ)		Modified QuEChERS-Method for the Analysis of Chlorothalonil in Fruits and Vegetables
11		Yes	No	0.494	11.8	0.01	10	cold	Mech. shaking, 2 min	ACN, Isooctane	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, PeCB	1				GC-MSD		QuEChERS – Citrate buffered (EN 15662)
12		Yes	No	0.151	0.8	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to Pure SOLVENT		Yes, other IS	1	101 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
13	x	Yes	Scope	0.089	-1.2	0.01	18	deep frozen	Ultra turrax, 3 min	EtOAc, 100 ml	None	No		Centrifugation, GPC, 5 min at 4000rpm		Std. spiked to MATRIX Extract, 5 points	EUPT-Blank	No		99.7 % | 3	other strawberry	other strawberry	GC-(μ) ECD	Agilent 6890	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
14		Yes	No	0.115	-0.3	0.01	10	deep frozen	Ultra turrax, 3 min	EtOAc	None	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	99 % | 2	EUPT-blank		GC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
15		Yes	Scope	0.146	0.7	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	3	100 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
16	x	No	No	0.147	0.7	0.01	10	slightly frozen	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	Yes, 1×	None	Centrifugation, 10 min high speed at 18850 g.		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 2	EUPT-blank	0.02 and 0.10 mg/kg	GC-MS/MS (QQQ)		Modified QuEChERS-Method for the Analysis of Chlorothalonil in Fruits and Vegetables EURL SRM
17	x	Yes	Scope	0.118	-0.2	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN, EtOAc	None	No	None	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Phenanthrene-D_{10}	2	86 % | 1	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: RP-SPE cleanup step
18		Yes	Scope	0.164	1.2	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, but only to check Extr. efficiency	1		EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Chlorothalonil

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
19	x	Yes	Scope	0.099	-0.8	0.01	5	slightly frozen	Mech. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No		Liq.-Liq. Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1				GC-TOF		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
20		Yes	Commodity	0.148	0.7	0.001	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	3	103 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
21		Yes	Scope	0.141	0.5	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, 1) Buffering; 2) FA		Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS		Yes, TPP	1	81 % | 1	EUPT-blank		GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.134	0.3	0.03	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaOAc/MgSO_4$			Centrifugation			None (pure Water/Solvent)	Yes, Captan-D_6	2	90 % |					QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
23		Yes	No	0.030	-3.0	0.01	15	just thawed	Man. shaking, 30 min	EtOAc	Other	No		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		-% | 2			GC-MSD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
24		Yes	Scope	0.119	-0.2	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		86.6 % | 1	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
25		Yes	No	0.123	-0.1	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		87 % | 1	EUPT-blank		GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662), Modification: acidic extraction
26		No	Commodity	0.130	0.2	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	96 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
27		Yes	Scope	FN	-3.7	0.01	10	deep frozen	Ultra turrax, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
28	x	Yes	Scope	0.107	-0.6	0.01	10	slightly frozen	Mech. shaking, 30 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$			None		Std. spiked to MATRIX Extract	EUPT-Blank	No		75 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
29	x	Yes	Commodity	0.106	-0.6	0.01	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		85 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
30	x	Yes	Commodity	0.121	-0.1	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$	Yes, 1×, pH modified with H_2SO_4				Procedural calibr. (Corr. for Recov.)	Other Bank			100 % |			GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
31		Yes		0.0987	-0.8	0.01	10	just thawed	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)			77 % | 2			GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
32		Yes	Scope	0.101	-0.8	0.01	10	cold	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, by buffering and acid (FA) addition	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorpyrifos-D_{10}	2				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
33	x	Yes	Scope	0.132	0.2	0.01	10	just thawed	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, HCB-D_6	1	93 % | 1	EUPT-blank	Multiple cali.	GC-MSD	NCI	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
34		Yes	No	0.125	0.0	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Antracene-D_6	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
35	x	No	No	0.143	0.6	0.01	10	deep frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, PCB-201	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: centrifugation step at -5°C
37		Yes	Commodity	0.120	-0.2	0.01	10	deep frozen	Man. shaking, 2 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No		None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	No			QC validation data		GC-MSD		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
38		Yes	No	0.110	-0.5	0.01	15	just thawed	Ultra turrax, 15 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Triphenylphosphine	1	109 % | 1	EUPT-blank		GC-Ion Trap		Mini-Luke-Type (Acetone DCM-PE)
39		Yes		0.142	0.5	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, bromophos	1	93.7 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: clean up
40		Yes	Scope	0.161	1.1	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/GCB/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		110 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
41		Yes	Scope	0.105	-0.6	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	None	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	57 % | 1	other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	0.105	-0.6	0.01	10	deep frozen	Man. shaking, 1 min	ACN, acidified with H_2SO_4	$NaCl/MgSO_4$	Yes, 1×	None	Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Chlorpyrifos-D_{10}	1	132 % | 1	EUPT-blank		GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662), Modification: acidified with H_2SO_4
44	x	Yes	Scope	0.067	-1.9	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TDCPP	1	93 % | 2	EUPT-blank	0.1 mg/kg	GC-MSD	SIM mode	QuEChERS – Citrate buffered (EN 15662), Modification: acidified ACN(1 % HOAc)
45		Yes	No	0.171	1.5	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$	Yes, 1×, Add 100 µL H_2SO_4 (conc) to sample homogenate		None		Std. spiked to MATRIX Extract	apple	Yes, TPP	1		other blank	0.02 mg/kg.	GC-MS/MS (QQQ)	EI pos	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
46		Yes	No	0.130	0.2	0.01	10	deep frozen	Man. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)		No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, other IS	2	64 % | 1	EUPT-blank		GC-(µ) ECD		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
47		Yes	No	0.170	1.4	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	$NaOAc/MgSO_4$	No		Centrifugation		Procedural calibr. (Corr. for Recov.)	vegetables/ fruit ME	Yes, TPP	2	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		Yes	Scope	0.131	0.2	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TDCPP	1	118 % | 2	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.0952	-1.0	0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	No		88.3 % | 1	EUPT-blank		GC-(µ) ECD		QuEChERS – Citrate buffered (EN 15662); analysed by GC-ECD because of GC-MS/MS malfunction
50		Yes	Scope	0.192	2.1	0.01	10	deep frozen	Mech. shaking, 30 min	EtOAc	None	No	None	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, PCB-28	2	120 % | >5	EUPT-blank		GC-MS/MS (QQQ)		in house method
51		Yes	No	0.230	3.3	0.01	10	deep frozen	Mech. shaking, 25 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS), Acetate Etyle/C_6H_{12} 1:9	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		100 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI pos	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
52		Yes	Commodity	0.132	0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP, but not IS corrected, recovery only	1	85 % | 1	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Chlorothalonil

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
53		Yes	Scope	0.119	-0.2	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, PCB-31	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
54		Yes	No	0.069	-1.8	0.01	10	deep frozen	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 10ul 5 %FA in acetonitrile into 1 ml extract added		Dispersive-SPE (PSA/GCB/$MgSO_4$), 6 ml of extract into 15 ml tube PSA/ GCB/$MgSO_4$		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
56		Yes	Scope	0.105	-0.6	0.01	10	cold	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		91.8 % | 2	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.094	-1.0	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		70 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	No	0.144	0.6	0.01	10	slightly frozen	Man. shaking, 1 min	EtOAc	Other	No	None	Dispersive-SPE (other); $MgSO_4$/ C18/PSA		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TDCPP	1	76.4 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Not buffered, partitioning salt: Na_2SO_4 (10 g)
62	x	No	No	0.087	-1.2	0.05	10	ambient	Man. shaking,	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	2	94 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no PSA Clean-up
63		Yes	Scope	0.171	1.5	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	0.151	0.8	0.005	10	deep frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$	Yes, 1×, Acidify with 100 µl H_2SO_4		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	2	99 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: Acidify with H_2SO_4 to pH~1
66	x	Yes	No	0.154	0.9	0.01	10	slightly frozen	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	110 % | 4	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
67	x	Yes	Scope	0.106	-0.6	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, PCB-209	1	66 % | 1	EUPT-blank	0.1 mg/kg	GC-(μ) ECD		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: solvent exchange before ECD analysis
69		Yes	No	0.0995	-0.8	0.01	10	slightly frozen	Ultra-sonic bath, 30 min	Acetone	None	No		Clena up 1 (SDVB), followed by SPE-column (ion exchange)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	3	70 % | 3	EUPT-blank		GC-MSD		acetone extraction, water adition, SPE (SDVB, PSA)
70		Yes		0.120	-0.2	0.01	10	just thawed	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (other); PSA/C18/ $MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Yes, TDCPP	1	139 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
71		Yes	No	0.0995	-0.8	0.01	15	ambient	Mech. shaking, 5 min	ACN	$NaOAc/MgSO_4$	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	2		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
72		Yes	No	0.175	1.6	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None	None		Std. spiked to MATRIX Extract	organic lettuce/ pepper	Yes, Chlorpyrifos-D_{10}	1	125 % | 2	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
73	x	Yes	Scope	0.126	0.0	0.01	10	slightly frozen	Ultra-sonic bath, 10 min	Acetone, CH_2Cl_2, petroleum ether	None	No				Std. spiked to MATRIX Extract	EUPT-Blank			80 % | 3	EUPT-blank		GC-(μ) ECD		Mini-Luke-Type (Acetone DCM-PE)
74		Yes	Commodity	0.133	0.2	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Parathion-d10	1	69 % | 1	EUPT-blank		GC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Chlorothalonil

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
75	x	Yes	Scope	0.172	1.5	0.01	10	deep frozen	Mech. shaking, 15 min	EtOAc, C_6H_{12}, mix 1/1	None	No	None	GPC		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Ditalimfos	2	92 % | 3	EUPT-blank		GC-MSD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: extr. solvent (etac) replaced with chex/etac 1/1 mixture
76		Yes	Scope	0.133	0.2	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, PCB-31	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
77		No	No	0.105	-0.6	0.01	15	slightly frozen	Mech. shaking, 15 min		$NaCl/MgSO_4$	No				Std. add. to sample PORTIONS (Corr. for Recov.)				91 % | 3	slope of std. add. to sample portions	0.05; 0.10; 0.20 mg/kg	GC-Ion Trap		EtOAc + 1 % HOAc
78		Yes	Commodity	0.122	-0.1	0.005	10	deep frozen	Ultra turrax, 3 min	Acetone, C_6H_{12}, EtOAc, C_6H_{12}/ EtOAc 1:1	NaCl	No	None	GPC, silica column		Std. spiked to MATRIX Extract	EUPT-Blank	No		89.5 % | 1	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		S-19 (§64 LFGB L00.00-334)
79		Yes	Scope	0.089	-1.2	0.01	10	deep frozen	Ultra turrax, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank			93 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
80		No	No	0.050	-2.4	0.01	10		Mech. shaking, QuEChERS)	ACN +1 % H_2SO_4 (e.g. dithianon	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None			EUPT-Blank	No			EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
81	x	No	No	0.125	0.0	0.01	10	deep frozen	Ultra turrax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, $NaHCO_3$		Centrifugation, Filtration		Std. spiked to MATRIX Extract				108 % | 3	EUPT-blank		GC-MS/MS (QQQ)	Thermo TSQ QUANTUM XLS Ultra	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
83	x	Yes	Scope	0.010	-3.7	0.01	10	deep frozen	Mech. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS), none	$NaCl/MgSO_4$	Yes, 1×, H_2SO_4 1 % pH = 1	None	None, none		Std. add. to extract ALIQUOTS		Yes, Nicarbazin	1	90 % | 3	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	QuEChERS acidy H_2SO_4 1 % ACN	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)); none
84		Yes	Commodity	0.150	0.8	0.01	10	deep frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	95 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
85	x	No	No	0.212	2.8	0.01	10	slightly frozen	Mech. shaking, 10 min	Acetone, CH_2Cl_2, Hexane	None	No	None	Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	110 % | 3	EUPT-blank	0.2 mg/kg	GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
86		Yes	Scope	0.096	-0.9	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	None	SPE-column (C18), Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract		Yes, Terbutryn-D_5	1	96 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.122	-0.1	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Diazinon-D_{10}	1	82 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
89		No	No	0.148	0.7	0.01	10	deep frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		93 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
90		No	No	0.127	0.1	0.01	10	deep frozen	Mech. shaking, 2 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		116 % | 1	EUPT-blank	0.010 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: injection was performed in EtOAc instead of acetonitrile (solvant was exchanged); longer experience (more than 2 years) with another method
91	x	Yes	Commodity	0.140	0.5	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		99.6 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
92		Yes	Commodity	0.106	-0.6	0.01	10	deep frozen	Mech. shaking, 3 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No					GC-Ion Trap	EI	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Chlorothalonil

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
93		Yes	Commodity	0.111	-0.5	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	83 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
94		Yes	Scope	0.135	0.3	0.01	50	deep frozen	Mech. shaking, 5 min	MeOH, CH_2Cl_2, EtOAc/C_6H_{12}		No	None	GPC		Std. spiked to MATRIX Extract	Other Bank	Yes, Mirex	2	112 % | 2	EUPT-blank		GC-(μ) ECD	1 µl inj.	S-19 (§64 LFGB L00.00-334)
95		Yes	Scope	0.116	-0.3	0.01	10	slightly frozen		ACN	$NaCl/MgSO_4$	Yes, 1×, at the beginning of the procedure - addition of 100 µl conc. H_2SO_4	None	Centrifugation		Std. add. to extract ALIQUOTS	strawberry purée	No		93 % | 4	QC validation data		GC-MS/MS (QQQ)		The Reference Method (QuEChERS for Chlorthalonil SRM-10) will be used in case of positive detektion of the analyt in the "Standard-QuEChERS-Extrakt"
96	x	Yes	Scope	0.103	-0.7	0.01	10	just thawed	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation, In addition filtration		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, Aldrin	1				GC-MSD	technical problems!	QuEChERS – Citrate buffered (EN 15662)
97		Yes	Scope	0.173	1.5	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, citrate buffer	None	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/ freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorpyrifos-D_{10}	1	88 % | 2	slope of std. add. to sample portions	near the result	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no PSA for CleanUp
98	x	Yes	Commodity	0.0353	-2.9	0.01	10	cold	Man. shaking, 1 min	ACN				Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, HCB-^{13}C	1	75 % | 1	EUPT-blank		GC-MS/MS (QQQ)	GC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	0.116	-0.3	0.01	10	deep frozen	Man. shaking w. intervals, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	<60 %% | 5	QC validation data	ongoing performance verification (0.05)	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
101		Yes	Scope	0.080	-1.4	0.01	15	ambient	Man. shaking, 1 min	ACN	$NaOAc/MgSO_4$	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract		Yes, Parathion-d10	1	98 % | 2	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
102		Yes	Scope	0.310	5.9	0.01	10	cold	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, use ACN with PH 1 for extraktion	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Captan-D_6	1					GC-CI-MS	Single Residue Methods, Analyses of Captan and Folpet via QuEChERS and GC-MS(CI)
103	x	Yes	Scope	0.138	0.4	0.005	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		103 % | 1	EUPT-blank	50 µg/kg	GC-MS/MS (QQQ)	EI-pos	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	Scope	0.102	-0.7	0.01	10	cold	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		89 % | 3	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
105	x	Yes	Scope	0.160	1.1	0.01	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation, Filtration, Filtration through anhydrous Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank		GC-(μ) ECD	GCMSMS confirmation	Mini-Luke-Type (Acetone DCM-PE)
106		No	No	FN	-3.7	0.01	10	ambient	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
107	x	Yes	Commodity	0.161	1.1	0.01	10	cold	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 time with H_2SO_4	Acidic hydrolysis prior to or during extraction	Freezing out		Std. spiked to MATRIX Extract		Yes, TPP	1	84 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
108		Yes	Scope	0.114	-0.4	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	71 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Chlorothalonil

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
109		Yes	No	0.145	0.6	0.01	10	ambient	Mech. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	Yes, 1×, 100 uL H_2SO_4	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	QQQ 7000C Agilent	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
110		No	No	0.167	1.3	0.01	15	cold	Mech. shaking, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation		Std. spiked to MATRIX Extract		No		88 % | 5	EUPT-blank		GC-Ion Trap		Mini-Luke-Type (Acetone DCM-PE)
112		No	No	0.037	-2.8	0.01	10	ambient	Mech. shaking, 1 min	ACN, C_6H_{12}	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to MATRIX Extract		No			EUPT-blank		GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662)
113		Yes	Scope	0.094	-1	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank	Yes, Desmetryn, Mirex	1	91 % | 1	EUPT-blank		GC-TOF		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Scope	0.135	0.3	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple	Yes, PCB-153	1	95 % | 3	EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		Yes	No	0.131	0.2	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	No		Centrifugation, Filtration		Std. add. to extract ALIQUOTS		Yes, PCB-52	2	92 % | 1	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)	2 MRM; EI	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
117		Yes	Commodity	0.102	-0.7	0.01	10	ambient	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Adding of 10 µL conc. sulphoric acid per 1 ml of the first extract		None		Std. add. to extract ALIQUOTS		Yes, TPP	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
118		Yes	Scope	0.086	-1.3	0.05	10	just thawed	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
120		Yes		0.111	-0.5	0.16	10	deep frozen	Man. shaking, 30 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	cucumber	No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
121		Yes	No	0.121	-0.1	0.01	10	ambient	Mech. shaking, 1 min	EtOAc	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	cucumber	No		104 % | 1	other blank	egg plant	GC-MS/MS (QQQ)	DB-5MS	QuEChERS – Citrate buffered (EN 15662), Modification: Ethyl Acetate as extraction solvent, no clean-up step
124	x	Yes	Scope	0.131	0.2	0.01	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Pet. Ether	None	No, No	None	Dessication with Na_2SO_4, Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		106.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
125		No	No	0.137	0.4	0.01	10	just thawed	Mech. shaking, 15 min	EtOAc	NaCl/$MgSO_4$	No		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)						GC-MS/MS (QQQ)	Cool On Column	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: 10 g sample + 10 ml EtAc + 8 g $MgSO_4$ + 1.5 g NaCl
126		No	No	0.131	0.2	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	NaCl/$MgSO_4$	No		GPC		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	1	88.8 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.154	0.9	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN + 0.1 % Ascorbic acid	NaCl/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	orange	Yes, TPP	1	119 % | 1	EUPT-blank		GC-MS/MS (QQQ)	Agilent 7000C - Agilent 7890B	SRM-10 modified with ascorbic acid
129		Yes	No	0.101	-0.8	0.01	10	deep frozen	Mech. shaking, 15 min	ACN, Add 100 µl H_2SO_4 (conc.)	NaCl/$MgSO_4$	Yes, 1×, pH ~1	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		72 % | 3	EUPT-blank		GC-MS/MS (QQQ)		10g sample • Add 100 µL H_2SO 4 (conc.) • 10 ml acetonitrile • 4g magnesium sulphate anhydrous, 1g sodium chloride, centrifuge • SRM-10
130		Yes	Scope	0.105	-0.6	0.01	10	slightly frozen	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$			Centrifugation		Std. spiked to MATRIX Extract		Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_3 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Chlorothalonil

Chlorothalonil (Assigned value = 0.125 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
3rd-131		No	Commodity	0.135	0.3	0.01	10	just thawed	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$		None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	59 % | 3	EUPT-blank	level; 0.010-0.20 mg/kg	GC-MS/MS (QQQ)	GC Agilent 7890A and 7000A GC/MS Triple Quad	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
3rd-132		Yes	Scope	0.07	-1.8	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix		None	Dispersive-SPE ($PSA/GCB/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, PCB-31	2	85 % | 2	slope of std. add. to sample portions		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-133		Yes	No	0.133	0.2	0.01	5	deep frozen	Man. shaking, 2 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$			None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Endosulfan sulfate $^{13}C_9$	1	97.2 % | 2	EUPT-blank	based on matrix blank 0.01 mg/kg.	LC-MS/MS (QQQ)	247>184	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: Quantitative analysis - standard solution five point calibration (after matrix-matched screening analysis)
3rd-134		Yes	No	0.110	-0.5	0.11	10	ambient	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaOAc/MgSO_4$		None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, other IS	1				GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
3rd-135		Yes	No	0.090	-1.1	0.01	15	ambient	Man. shaking, 20 min	ACN + 1 % HOAc	$NaOAc/MgSO_4$			Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1				GC-MS/MS (QQQ)	MRM	QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: Add15 ml of acidified ACN .Add 6g $MgSO_4$ and 1.5g Na Acetate. 3 ml of aliquot to 0.45 g of $MgSO_4$ and 0.15g of PSA. Transfer 1 ml for GCMSMS .; Result obtained using new developed method using GCMSMS
3rd-136		Yes	Scope	0.0422	-2.7	0.02	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$		None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		90.9 % | 3	EUPT-blank	compound used for spiking	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Extracted by 10 ml of acetonitilre and of 4 g $MgSO_4$ and 1 g NaCl for partitioning. cleanup Kit$MgSO_4$ 900 mg, PSA 150 mg
3rd-137		No	No	0.285	5.1	0.01	15	ambient	Mech. shaking, 10 min	ACN, 1 % HOAc in acetonitrile	$NaOAc/MgSO_4$		None	Dispersive-SPE ($PSA/MgSO_4$), no		Std. spiked to MATRIX Extract	EUPT-Blank	No		90 % | 3	EUPT-blank	no use internal standard, spiken is RL	GC-(μ) ECD	no	QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: no use NaCl.; Experience is less than 6 months
3rd-138		Yes	Scope	0.095	-1.0	0.01	10	just thawed	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank			97 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-139		No	Scope	0.118	-0.2	0.01	10	deep frozen	Mech. shaking, 2 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$		None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Triphenyl-methane	1				GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithiocarbamates (Assigned value = 0.267 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.330	0.9	0.01	5	deep frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. add. to sample PORTIONS (Corr. for Recov.)		Other	Yes, Thiophene	1				GC-MSD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
2		Yes	Scope	0.234	-0.5	0.03	2	deep frozen		$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	CS_2 (carbon disulfide)	No		109 % | 3	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, headspace SPME, GC-Analysis of CS_2 (EN 12396-2 type)
3	x	Yes	Scope	0.196	-1.1	0.05	25	ambient	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$, Isooctane, 75 ml HCl, 12.5 ml isooctane, 1.125 g $SnCl_2$	None	Yes, 1×, addition of 75 ml of HCl (15 %)	Reductive Cleavage ($SnCl_2/HCl$), addition of 1.125 g $SnCl_2$	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		72.8 % | 1	EUPT-blank		GC-MS/MS (QQQ)		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
4		Yes	Commodity	0.330	0.9	0.01	25	deep frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to MATRIX Extract	other organic strawberry	CS_2 (carbon disulfide)	No		117 % | 2	other blank	ziram, 0.06 mg/kg	GC-MSD	SIM	$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2; as CS_2
5		Yes	Scope	0.244	-0.3	0.05	50	cold	Man. shaking w. intervals, 60 min	Isooctane	None	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		97 % | 2	EUPT-blank	0.634 mg/kg CS_2, thiram as compound	GC-MSD	ions 76 and 78 were scaned	$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
6	x	Yes	No	0.239	-0.4	0.01	25	just thawed	Man. shaking, 2 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT (HCl; $SnCl_2$; H_2O)	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		63 % | 2	EUPT-blank	(60.5 - 65.6)%	GC-MSD	m/z 76	$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2, Modification: EN 12396-2 - Non-fatty food - Determination of dithiocarbamates (...). Manebe standard used for recoveries.
7		No	Scope	0.279	0.2	0.01	20	cold	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	No			EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
8		Yes	Commodity	0.225	-0.6	0.05	10	just thawed	Man. shaking, 1 min	$H_2O/SnCl_2/HCl$, Isooctane	NaCl/ $MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		92 % | 1	EUPT-blank		GC-(P) FPD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
9		Yes	No	0.341	1.1	0.01	3	deep frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$	None	Yes, 1×, With diethanolamine	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		71 % | 1	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
10		Yes	No	0.382	1.7	0.03	25	slightly frozen	Man. shaking w. intervals, 120 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	Liq.-Liq. Part., Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	EUPT-Blank	CS_2 (carbon disulfide)	No		85 % | 1	EUPT-blank		GC-MS/MS (QQQ)		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2, Modification: GC-MS/MS
12		No	Scope	0.193	-1.1	0.01	5	ambient		$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$)													
13	x	Yes	Scope	0.286	0.3	0.05	25	deep frozen	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$, Isooctane, 150 ml $SnCl_2$ in HCl	None	No	Reductive Cleavage ($SnCl_2/HCl$)	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract, 5 points	EUPT-Blank	CS_2 (carbon disulfide)	No		85.8 % | 2	other strawberry	other strawberry	GC-(μ) ECD	Agilent 6890	$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
14		Yes	Commodity	0.228	-0.6	0.03	200	deep frozen		$H_2O/SnCl_2/HCl$, 30 min after the beginning of the boiling	None	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		% |			Spectrophotometer		$SnCl_2/HCl$-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
15		Yes	No	0.280	0.2	0.03	10	cold	Man. shaking, 1 min	$H_2O/SnCl_2/HCl$, Isooctane	NaCl/ $MgSO_4$/ Citrate-Buffer mix	Yes, 1×		Dispersive-SPE (PSA/ $MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		Yes, TPP	3	100 % | 2	EUPT-blank		GC-MS/MS (QQQ)		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
16	x	Yes	Commodity	0.210	-0.9	0.03	50	slightly frozen	Mech. shaking, 120 min	Isooctane, H_2O/ $SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		70 % | 2	EUPT-blank	0.10 and 0.50 mg/kg	GC-MSD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
17	x	Yes	Commodity	0.303	0.5	0.05	25	just thawed	Ultrasonic bath, 60 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT: isooctane		CS_2 (carbon disulfide)	No						GC-FPD (S)	$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithiocarbamates (Assigned value = 0.267 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
18		Yes	Scope	0.270	0.0	0.01	10	deep frozen	Mech. shaking, 30 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Other	No		82 % | 2	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396, Modification: Sn/I2/HCL-cleavage. KOH/Ethanol, spectroph. analysis (Xanthogenate)
19	x	Yes	Scope	0.246	-0.3	0.03	30	slightly frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$			Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT			No					GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
20		Yes	Commodity	0.300	0.5	0.001	1	deep frozen	Mech. shaking, 1 min			No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)		No		105 % | 4	EUPT-blank		GC-Ion Trap		$SnCl_2$/HCl-cleavage, headspace SPME, GC-Analysis of CS_2 (EN 12396-2 type)
21		Yes	Commodity	0.211	-0.8	0.01	20	deep frozen		$H_2O/SnCl_2/HCl$		Yes, 1×, Addition of HCL	Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to MATRIX Extract		CS_2 (carbon disulfide)			78 % | 1	EUPT-blank		GC-(P) FPD	Headspace Analysis	$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2, Modification: GC-Analysis with GC-FPD
22		Yes	Scope	0.337	1.0	0.05	5	slightly frozen		H_2O							EUPT-Blank		Yes, other IS	3				GC-(μ) ECD		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2, Modification: with Int. Std
24		Yes	Scope	0.313	0.7	0.05	25	deep frozen	Man. shaking w. intervals, 120 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to MATRIX Extract	EUPT-Blank	CS_2 (carbon disulfide)	No		95.5 % | 2	EUPT-blank		GC-(μ) ECD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
25		Yes	No	0.216	-0.8	0.1	100	slightly frozen	Mech. shaking, 30 min	$H_2O/SnCl_2/HCl$	None	Yes, 1×	None	None		Std. spiked to Pure SOLVENT	EUPT-Blank		No		92 % | 1	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
26		No	Commodity	0.180	-1.3	0.01	10	deep frozen	Man. shaking w. intervals, 120 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No		None		Std. spiked to Pure SOLVENT	EUPT-Blank	Thiram	Yes, Iodoethane	2				GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
28	x	No	No	0.305	0.6	0.05	50	slightly frozen	Mech. shaking, 120 min	Isooctane	None		Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		75 % | 1	EUPT-blank		GC-(P) FPD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
30	x	Yes	Commodity	0.167	-1.5	0.03	10	deep frozen		Isooctane			Reductive Cleavage ($SnCl_2/HCl$)			Procedural calibr. (Corr. for Recov.)	EUPT-Blank				100 % |			GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
31		Yes		0.289	0.3	0.05	10	just thawed		$H_2O/SnCl_2/HCl$	None	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		Yes, Thio-phene	1	104 % | 2			GC-(P) FPD		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
32		Yes	Scope	0.296	0.4	0.02	1	ambient	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$, H_2O, 2 ml	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)		No					GC-MS/MS (QQQ)		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
33	x	Yes	Scope	0.348	1.2	0.025	25	cold	Ultrasonic bath, 120 min	$H_2O/SnCl_2/HCl$		Yes, 1×, HCl	Reductive Cleavage ($SnCl_2/HCl$)	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	CS_2 (carbon disulfide)	Yes, CH_2Cl_2	1	100 % | 1	EUPT-blank	Multiple cali.	GC-MSD	EI	$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
34		Yes	Scope	0.318	0.8	0.01	15	slightly frozen	Mech. shaking, 90 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		Yes, $^{13}CS_2$	1	80 % | 2	QC validation data		GC-MS/MS (QQQ)		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
35	x	No	No	0.819	8.3	0.03	50	deep frozen	Mech. shaking, 120 min	Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		16 % | 1	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
37		No	No	0.260	-0.1	0.1	50	deep frozen		Isooctane	None	No	Acidic hydrolysis prior to or during extraction, Acidic hydrolysis at 80°C for 120 min with Isooctane extraction			Std. spiked to MATRIX Extract	EUPT-Blank		No			QC validation data		GC-(μ) ECD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
38		Yes	No	0.200	-1.0	0.05	50	slightly frozen	Man. shaking, 60 min	Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	No		66 % | 1	EUPT-blank		GC-(P) FPD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
39		Yes	Scope	0.310	0.6	0.02	2	slightly frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		Yes, Chloro-form	1	113 % | 1	EUPT-blank		GC-Ion Trap		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Dithiocarbamates

Dithiocarbamates (Assigned value = 0.267 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
40		Yes	No	0.250	-0.3	0.04	25	deep frozen	Ultrasonic bath, 120 min	Isooctane		No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Thiram	No		70 % | 3	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
41		Yes	Scope	0.140	-1.9	0.01	100	cold		H_2O/$SnCl_2$/HCl			Reductive Cleavage ($SnCl_2$/HCl)			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		120 % | 3	other blank		Spectrophotometer		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
42		Yes	Scope	0.143	-1.9	0.01	20	deep frozen	Mech. shaking, 120 min	H_2O/$SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		102 % | 1	EUPT-blank		GC-MSD	EI	$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
43		Yes	Scope	0.203	-1.0	0.03	20	deep frozen	Man. shaking, 120 min	$SnCl_2$/HCl			Reductive Cleavage ($SnCl_2$/HCl)	Liq.-Liq. Part., isooctane			None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		91 % | 2	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
44	x	Yes	Commodity	0.323	0.8	0.05	25	slightly frozen	Mech. shaking, 120 min	Isooctane, H_2O/$SnCl_2$/HCl	None	No				Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	No		98 % | 2	EUPT-blank	0.5 mg/kg thiram	GC-(μ) ECD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2, Modification: 25 g sample
45		Yes	Commodity	0.236	-0.5	0.025	20	deep frozen				No	Reductive Cleavage ($SnCl_2$/HCl)	Liq.-Liq. Part., isooctane		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No			EUPT-blank	0.05 mg/kg CS_2	GC-MSD	EI pos	$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
46		Yes	Scope	0.203	-1	0.03	200	deep frozen		H_2O/$SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	No		130 % | 1	EUPT-blank		Spectrophotometer		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
47		Yes	Commodity	0.306	0.6	0.01	3	deep frozen	Man. shaking, 30 min	H_2O/$SnCl_2$/HCl, Isooctane	None	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	Yes, Alkane	1	99 % | 1	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
48		Yes	Scope	0.284	0.3	0.02	20	slightly frozen		H_2O/$SnCl_2$/HCl, Initial add. H_2O; Add. $SnCl_2$/HCL after 5 minutes			Reductive Cleavage ($SnCl_2$/HCl)	None			None (pure Water/Solvent)	CS_2 (carbon disulfide)			93 % | 1	EUPT-blank		Spectrophotometer		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
49	x	Yes	Commodity	0.259	-0.1	0.03	50	cold		H_2O/$SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		97.6 % | 1	EUPT-blank		Spectrophotometer		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
50		Yes	Scope	0.314	0.7	0.01	5	deep frozen	Mech. shaking, 60 min				Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to MATRIX Extract	EUPT-Blank	CS_2 (carbon disulfide)	Yes, Thiophene	1	114 % | 1	slope of std. add. to sample portions		GC-Ion Trap		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
52		Yes	Commodity	0.500	3.5	0.05	50	deep frozen	Mech. shaking, 90 min	H_2O/$SnCl_2$/HCl, Isooctane		No	Reductive Cleavage ($SnCl_2$/HCl)	Liq.-Liq. Part.		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Thiram	No							
53		Yes	Scope	0.298	0.5	0.01	5	deep frozen	Mech. shaking, 30 min	H_2O/$SnCl_2$/HCl		No	Reductive Cleavage ($SnCl_2$/HCl)	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	CS_2 (carbon disulfide)	No		100 % | 1	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2, Modification: sample weight
55		Yes	Scope	0.227	-0.6	0.05	20	just thawed	Man. shaking, 120 min	H_2O/$SnCl_2$/HCl, Isooctane		No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No			QC validation data		GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
56		Yes	Scope	0.250	-0.3	0.03	100	cold		H_2O/$SnCl_2$/HCl			Reductive Cleavage ($SnCl_2$/HCl)			Procedural calibr. (Corr. for Recov.)	None (pure Water/Solvent)	Other	No		90.8 % | 4	EUPT-blank		Spectrophotometer		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396, Modification: Potassium xanthogenate;pyrolysis and decomposition;forming methylene blue (with N, N-dimethyl-1,4-phenylenediamine dihydrochloride)
57		No	No	0.270	0.0	0.01	5	deep frozen	Man. shaking, 60 min	H_2O/$SnCl_2$/HCl	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	CS_2 (carbon disulfide)	No		83 % | 2	EUPT-blank		GC-(P) FPD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
58		Yes	Scope	0.271	0.1	0.01	5	deep frozen	Mech. shaking, 45 min	H_2O/$SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to MATRIX Extract	other organic strawberry	CS_2 (carbon disulfide)	Yes, Chloroform	1	105.9 % | 3	EUPT-blank	Average	GC-MSD	SIM	$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
59		Yes	Commodity	0.256	-0.2	0.01	50	deep frozen													98 % | 2	EUPT-blank	thiram			$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Dithiocarbamates

Dithiocarbamates (Assigned value = 0.267 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
60		Yes	Scope	0.278	0.2	0.03	50	slightly frozen	Man. shaking w. intervals, 120 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to MATRIX Extract	EUPT-Blank	CS_2 (carbon disulfide)	No		94.7 % | 1	EUPT-blank	0.3 mg/kg	GC-(μ) ECD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
62	x	No	Scope	0.208	-0.9	0.05	25	ambient					Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	Yes, Thiram	1	94 % | 1	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
63		Yes	Commodity	0.219	-0.7	0.01	5	ambient	Mech. shaking, 30 min	$H_2O/SnCl_2/HCl$	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Thiram						GC-Ion Trap		$SnCl_2/HCl$-cleavage, headspace SPME, GC-Analysis of CS_2 (EN 12396-2 type)
64		Yes	Scope	0.255	-0.2	0.01	25	deep frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$, Isooctane	None		Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		120 % | 2	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
65		Yes	Commodity	0.259	-0.1	0.25	200	deep frozen		$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None				CS_2 (carbon disulfide)	No		89 % | 2	QC validation data		Spectro-photom-eter		$SnCl_2/HCl$-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
66	x	Yes	Commodity	0.268	0.0	0.03	50	slightly frozen	Man. shaking w. intervals, 60 min	Isooctane-$SnCl_2$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Thiram	Yes, ILIS	1	88 % | 4	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
67	x	Yes	Scope	0.287	0.3	0.05	20	slightly frozen		$H_2O/SnCl_2/HCl$			Reductive Cleavage ($SnCl_2/HCl$), Reac-tion time is 1 hour.	None		Std. spiked to Pure SOLVENT		Thiram	Yes, Tio-phene (just for RRT of CS_2, not for quantity)	1	73.3 % | 1	EUPT-blank	0.4 mg/kg	GC-(P) FPD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
68		Yes	Commodity	0.280	0.2	0.01	50	deep frozen		$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No					Spectro-photom-eter		$SnCl_2/HCl$-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
69		Yes	Commodity	0.308	0.6	0.05	50	slightly frozen	Man. shaking w. intervals, 60 min	Isooctane	None		Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		No		95 % | 2	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
70		Yes	Scope	0.270	0.0	0.01	5	just thawed	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$	None	No	None	None		Std. spiked to MATRIX Extract		CS_2 (carbon disulfide)	Yes, Chloro-form	1	96.6 % |	Salad	salad blank	GC-MSD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
71		Yes	No	0.247	-0.3	0.05	2	ambient	Mech. shaking, 1 min	Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	Liq.-Liq. Part.		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No			EUPT-blank		GC-Ion Trap		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2, Modification: Sample weight 2 grams and 2 ml of extracción solvent
72		Yes	Commodity	0.265	0.0	0.05	25	deep frozen	Man. shaking w. intervals, 60 min	$H_2O/SnCl_2/HCl$, Isooctane		No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		92 % | 2	EUPT-blank	0.1 mg/kg; Thiram	GC-(P) FPD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
73	x	No	No	0.342	1.1	0.03	4	slightly frozen	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$		No				Std. spiked to Pure SOLVENT	None (pure Water/Solvent)							GC-(P) FPD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
74		Yes	Commodity	0.372	1.6	0.025	25	slightly frozen	Man. shaking w. intervals, 60 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	Liq.-Liq. Part.		Std. spiked to MATRIX Extract	Persimmon	CS_2 (carbon disulfide)	No		80 % | 1	EUPT-blank		GC-(P) FPD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
75	x	Yes	Scope	0.476	3.1	0.03	10	deep frozen	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to MATRIX Extract	EUPT-Blank	CS_2 (carbon disulfide)	No		82 % | 3	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
76		Yes	Scope	0.376	1.6	0.01	5	just thawed		$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)			Procedural calibr. (Corr. for Recov.)	EUPT-Blank	CS_2 (carbon disulfide)	No			QC validation data		GC-(μ) ECD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
77		Yes	No	0.191	-1.1	0.02	4	slightly frozen	Ultrasonic bath, 10 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)			80 % | 1	QC validation data	0.02 mg/kg; valid. in grape	GC-(P) FPD	GC-PFPD (pulsed flame PD)	$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithiocarbamates (Assigned value = 0.267 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
78		Yes	Commodity	0.211	-0.8	0.01	50	deep frozen		$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		81.9 % | 1	EUPT-blank	0.25 mg/kg	Spectro-photom-eter		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
79		Yes	Scope	0.092	-2.6	0.01	10	deep frozen	Man. shaking, >180 min	Isooctane	Other	No	Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)				101 % | 2	EUPT-blank		GC-(P) FPD		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
81	x	No	Scope	0.251	-0.2	0.2	50	deep frozen	Man. shaking w. intervals, 120 min	$H_2O/SnCl_2/HCl$, Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to MATRIX Extract, Rec. Factor			Yes, Thio-phene	2	63 % | 3	other organic strawberry	other organic strawberry	GC-(P) FPD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
82		Yes	Commodity	0.210	-0.9	0.03	50	deep frozen	Man. shaking, 30 min	$H_2O/SnCl_2/HCl$, $H_2O/SnCl_2/HCl$	None	Yes, 1×, HCl	Reductive Cleavage ($SnCl_2/HCl$)	NaOH, H_2SO_4		Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	No		98 % | 2	EUPT-blank	thiram (0.20 mg/kg)	Spectro-photom-eter	UV (302 nm, 272 nm, 332 nm)	$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
84		Yes	Commodity	0.290	0.3	0.03	5	deep frozen	Mech. shaking, 30 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$), according to protocol (S64 method)	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	CS_2 (carbon disulfide)	Yes, Thio-phene	1	95 % | 3	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
86		Yes	Scope	0.420	2.3	0.005	1	deep frozen	Ultrasonic bath, 90 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	Yes, ILIS	1	95 % | 2	EUPT-blank		GC-MSD	Headspace	$SnCl_2$/HCl-cleavage, headspace SPME, GC-Analysis of CS_2 (EN 12396-2 type)
87		Yes	No	0.231	-0.5	0.1	50	just thawed	Man. shaking w. intervals, 120 min	Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$), CS_2 is released after chemical cleavage of dithiocarbamates and partitions into isooctane	None		Std. spiked to Pure SOLVENT	EUPT-Blank	CS_2 (carbon disulfide)	No		98 % | >5	EUPT-blank	Thiram (0.2 mg/kg, 0.4 mg/kg, 0.6 mg/kg)	GC-TOF	transfer line 260C, source 220C, splitless	$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
88		Yes	No	0.255	-0.2	0.03	50	deep frozen	Man. shaking w. intervals, 60 min	Isooctane, $H_2O/SnCl_2/HCl$	None	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		No		98 % | 1	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
90		Yes	No	0.566	4.5	0.03	2	deep frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Other	No					GC-MS	GC-MS	$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
91	x	Yes	Commodity	0.280	0.2	0.01	50	ambient	Mech. shaking, 120 min	Isooctane, $SnCl_2$/ HCl	None	Yes, 1×	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		110 % | 1	EUPT-blank		GC-(P) FPD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
92		Yes	Commodity	0.281	0.2	0.03	20	deep frozen		$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Thiram	No					GC-(P) FPD		$SnCl_2$/HCl-cleavage, headspace SPME, GC-Analysis of CS_2 (EN 12396-2 type)
94		Yes	Scope	0.295	0.4	0.04	50	deep frozen		$H_2O/SnCl_2/HCl$			Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		92 % | 2	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
95		Yes	Scope	0.212	-0.8	0.01	25	slightly frozen		$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$), 30 minutes for hydrolysis	Distillation passing through $NaOH+H_2SO_4$		Std. spiked to Pure SOLVENT: MeOHic KOH		CS_2 (carbon disulfide)	No		86.5 % | 4	other blank	different matrices with Na-Diethyl-DTC	Spectro-photom-eter		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
96	x	Yes	Scope	0.307	0.6	0.03	2	just thawed	Man. shaking, 1 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Thiram	No					GC-MSD	Manual HS-Injection	$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
97		Yes	Commodity	0.348	1.2	0.02	1	cold	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$, Isooctane	None		Reductive Cleavage ($SnCl_2/HCl$)	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Thiram	No					GC-MS/MS (QQQ)		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
98	x	Yes	Commodity	0.247	-0.3	0.03	50	cold	Man. shaking w. intervals, 60 min	$H_2O/SnCl_2/HCl$				None		Std. spiked to MATRIX Extract	EUPT-Blank		No		99 % | 1	EUPT-blank		GC-MSD	GC-MS	$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Dithiocarbamates

Dithiocarbamates (Assigned value = 0.267 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
99		Yes	Commodity	0.282	0.2	0.05	10	deep frozen	Mech. shaking, 120 min	$H_2O/SnCl_2$/HCl, Isooctane		No	Reductive Cleavage ($SnCl_2$/HCl), $SnCl_2$/HCl-cleavage 120 min, 80°C	Liq.-Liq. Part., liquid-liquid partition-ing with isooctane		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		98 % | 1	EUPT-blank	0.411 mg/kg Thiram on EUPT-blank matrial	GC-MSD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2, Modification: Headspace-GC-MS
100		Yes	No	0.330	0.9	0.3	75	ambient				No				Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No					Spectro-photom-eter		$SnCl_2$/HCl-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
102		No	Scope	0.240	-0.4	0.01	5	cold		$H_2O/SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No					GC-MSD		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2, Modification: GC-MS
103	x	Yes	Scope	0.263	-0.1	0.02	50	slightly frozen	Mech. shaking, 120 min	$H_2O/SnCl_2$/HCl, Isooctane	Other	No	None	None		Std. spiked to Pure SOLVENT, Rec. Factor	EUPT-Blank	CS_2 (carbon disulfide)	No	1	61 % | 1	EUPT-blank	200 µg/kg	GC-MS/MS (QQQ)	EI-SIM mode	$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
104		Yes	Scope	0.296	0.4	0.03	10	cold	Man. shaking, 90 min	$H_2O/SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to MATRIX Extract	EUPT-Blank	CS_2 (carbon disulfide)	Yes, Thio-phene	1	116 % | 3	EUPT-blank		GC-(P) FPD		$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
105	x	Yes	Scope	0.260	-0.1	0.03	50	slightly frozen	Mech. shaking, 60 min	Toluene	None	No	Reductive Cleavage ($SnCl_2$/HCl)	Freezing out, Filtration		Std. spiked to Pure SOLVENT		Thiram	No			EUPT-blank		GC-MSD	GC-FPD sulfur filter confirmation	$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
106		No	Scope	0.181	-1.3	0.05	2	ambient	Man. shaking,	Isooctane		No	Reductive Cleavage	Centrifugation		Std. spiked to	EUPT-Blank	CS_2 (carbon	No			EUPT-blank		GC-(P) FPD		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar
107	x	Yes	Commodity	0.147	-1.8	0.03	200	cold		$H_2O/SnCl_2$/HCl	None	No				Std. spiked to Pure SOLVENT					105 % | 1			Spectro-photom-eter		$SnCl_2$/HCl-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
108		Yes	Scope	0.270	0.0	0.03	50	deep frozen		$H_2O/SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to MATRIX Extract	EUPT-Blank		No		80 % | 3	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
109		Yes	Scope	0.302	0.5	0.05	3	just thawed	Mech. shaking, 30 min	$H_2O/SnCl_2$/HCl, Extr. 30 min + tempera-ture: 80 °C			Reductive Cleavage ($SnCl_2$/HCl)	None		Procedural calibr. (Corr. for Recov.)	None (pure Water/Solvent)	Thiram	No		100 % | 3	EUPT-blank	0.05, 0.10. 0.50 and 1.00 mg/kg	GC-(P) FPD	3800 Varian	$SnCl_2$/HCl-cleavage, headspace sampling, GC-Analysis of CS_2
111		Yes	Commodity	0.240	-0.4	0.05	200	slightly frozen		$H_2O/SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)			Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	No		94.4 % | 2	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCl-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
113		Yes	Scope	0.340	1.1	0.02	50	slightly frozen								Std. spiked to MATRIX Extract					87 % | 1	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCL-cleavage, KOH/MeOH, spectroph. analysis (Xanthogenate mth.) (EN 12396
114		No	No	0.290	0.3	0.05	100	ambient		$H_2O/SnCl_2$/HCl		No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)				98 % | 2	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCl-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
115		Yes	Commodity	0.280	0.2	0.05	2	just thawed	Mech. shaking, 180 min	$H_2O/SnCl_2$/HCl	NaCl	No	Reductive Cleavage ($SnCl_2$/HCl)			Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)		No		100 % | 3	EUPT-blank		GC-MSD		$SnCl_2$/HCl-cleavage, headspace SPME, GC-Analysis of CS_2 (EN 12396-2 type)
116		No	Commodity	0.253	-0.2	0.1	50	slightly frozen		$H_2O/SnCl_2$/HCl	None		Reductive Cleavage ($SnCl_2$/HCl)			Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)			93 % | 1	other blank	apple; 0.4 mg/kg	Spectro-photom-eter	435 nm cell 4cm	$SnCl_2$/HCl-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-
118		Yes	Scope	0.150	-1.8	0.04	5	just thawed	Man. shaking w. intervals, 120 min	$H_2O/SnCl_2$/HCl, Isooctane		No	Reductive Cleavage ($SnCl_2$/HCl)			Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Other	No					GC-MS/MS (QQQ)		$SnCl_2$/HCl-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
119		Yes	Scope	0.269	0.0	0.05	100	slightly frozen		$H_2O/SnCl_2$/HCl	None	No	Reductive Cleavage ($SnCl_2$/HCl)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		111.5 % | 1	EUPT-blank		Spectro-photom-eter		$SnCl_2$/HCl-cleavage, Cu(II) acetate & DEA spectroph. analysis (EN 12396-1/DFG S15-

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Dithiocarbamates

Dithiocarbamates (Assigned value = 0.267 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
122		No	No	0.274	0.1	0.03	10	deep frozen	Mech. shaking, 60 min	$H_2O/SnCl_2/HCl$, Heptane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	Liq.-Liq. Part.		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		83 % | 5	EUPT-blank		GC-MS/MS (QQQ)		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2, Modification: Extr. in heptane instead of isooctane, working solutions of CS_2 and Thiram in heptane instead of isooctane
124	x	Yes	Scope	0.221	-0.7	0.1	50	slightly frozen	Man. shaking w. intervals, 60 min	Isooctane, $H_2O/SnCl_2/HCl$, Other, specify under details	NaCl	No	Reductive Cleavage ($SnCl_2/HCl$)	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	CS_2 (carbon disulfide)	No		60.9 % | 2	EUPT-blank		GC-MS/MS (QQQ)		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
127		Yes	Scope	0.336	1.0	0.01	5	slightly frozen	Mech. shaking, 20 min	$H_2O/SnCl_2/HCl$	None	No	Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Thiram	No		77 % | 1	EUPT-blank		GC-MSD	Bruker 320 - Bruker 450GC	$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
129		Yes	Scope	0.142	-1.9	0.025	50	deep frozen	Mech. shaking, 90 min	Isooctane	None	No	Reductive Cleavage ($SnCl_2/HCl$)	Liq.-Liq. Part., Filtration		Std. spiked to Pure SOLVENT	EUPT-Blank	CS_2 (carbon disulfide)	No		70 % | 2	EUPT-blank		GC-(P) FPD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
130		Yes	Scope	0.181	-1.3	0.02	5	slightly frozen		$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$)			Std. spiked to Pure SOLVENT		Thiram	Yes, Thiophene	1	103 % | 3	EUPT-blank		GC-MSD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
3rd-131		Yes	Commodity	0.235	-0.5	0.05	5	just thawed	Man. shaking w. intervals, 60 min	$H_2O/SnCl_2/HCl$			Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to MATRIX Extract	Peach	CS_2 (carbon disulfide)	No		92 % | 3	QC validation data	level; 0.05-1,00 mg/kg	GC-(μ) ECD	Agilent 7890A GC-μECD, Head Space	$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2, Modification: Weigh 5.0 g of the frozen grained fruit or vegetable in a head space vial, add 6 ml of a solution of stannous chloride, and close by teflon stopper. B
3rd-132		Yes	Scope	0.290	0.3	0.05	5	cold		$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$)	None		Other	EUPT-Blank		No		92 % | 2	slope of std. add. to sample portions		GC-(μ) ECD		$SnCl_2/HCl$-cleavage, headspace SPME, GC-Analysis of CS_2 (EN 12396-2 type); For determination of DTC, we use calibration curve with standard addition of CS_2. In head-space vial put a 5 ml H_2O, 5 ml $SnCl_2$ and an appropriate increase amount of CS_2.
3rd-134		Yes	No	0.270	0.0	0.27	2	ambient	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No					GC-(P) FPD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2
3rd-135		Yes	No	1.960	25.4	0.2	20	ambient	Man. shaking, 60 min	2 %$SnCl_2$ and isooctane.						Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No					GC-MSD	SIM	$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2, Modification: Add 20 ml of water, 50 ml $SnCl_2$, 20 ml isooctane. Hydrolyze in waterbath (80°C) for 1 hour. 1 ml of aliquot for GCMS.; Result obtained using new developed method using GCMS
3rd-136		Yes	Scope	0.232	-0.5	0.05	50	deep frozen	Mech. shaking, 120 min	$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$)	Liq.-Liq. Part.		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	CS_2 (carbon disulfide)	No		91.1 % | 1	EUPT-blank	compound used for spiking	GC-(μ) ECD		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
3rd-138		Yes	Scope	0.304	0.6	0.05	50	just thawed		Isooctane						Std. spiked to Pure SOLVENT	EUPT-Blank				76 % | 1	EUPT-blank		GC-MS/MS (QQQ)		$SnCl_2/HCl$-cleavage, liq.-liq.-part. w. non-polar solvent, GC-Analysis of CS_2
3rd-139		Yes	Scope	0.473	3.1	0.03	1	deep frozen	Mech. shaking, 30 min	$H_2O/SnCl_2/HCl$	None		Reductive Cleavage ($SnCl_2/HCl$)	None		Std. spiked to Pure SOLVENT		CS_2 (carbon disulfide)	No					GC-MSD		$SnCl_2/HCl$-cleavage, headspace sampling, GC-Analysis of CS_2

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Fenbutatine Oxide

Fenbutatine Oxide (Assigned value = 0.086 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.076	-0.4	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS		No					LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	FN	-3.5	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables	Yes, other IS	1				LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Commodity	0.111	1.2	0.01	10	ambient	Mech. shaking, 15 min	ACN	None	Yes, 1×, addition of 30 ml of acetonitrile 2 % FA as extraction solvent	None	Centrifugation, Filtration, filtration on 0.2 µm PDVF filter		Std. spiked to MATRIX Extract	EUPT-Blank	No		88.6 % | 1	EUPT-blank		LC-MS/MS (QQQ)		30 ml of extraction mixture, mechanical shaking (15 min), centrifugation, volume ajusted at 40 ml, filtration before injection
4		Yes	Commodity	0.0576	-1.3	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		102 % | 1	EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	2 MRM	QuEChERS – Citrate buffered (EN 15662), Modification: no dSPE clean-up
6	x	Yes	No	0.089	0.2	0.01	10	slightly frozen	Man. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	No		103.4 % | 2	EUPT-blank	(100.4 - 106.6)%	LC-MS/MS (QQQ)		Analysis of Organotin Compounds via QuEChERS and LC-MS/MS Version 2 (last update:24.04.2013)
7		Yes	Scope	0.083	-0.1	0.01	10	cold	Mech. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Linuron-D_6	1				LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
9		Yes	No	0.0624	-1.1	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	Tomato	No		86 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean up
12		Yes	No	0.110	1.1	0.01	10	ambient	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			Dispersive-SPE (PSA/$MgSO_4$)						120 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
13	x	Yes	Scope	0.081	-0.2	0.01	10	deep frozen	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$	No		Centrifugation, 5 min at 5000rpm		Std. spiked to MATRIX Extract, 3 points	EUPT-Blank	No		96.8 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Agilent 6460	QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: Extr. in Acetonitril, adding salts, centrifugation, put into the vial, dilution 1:1 with mobile phase
14		Yes	No	0.080	-0.3	0.01	10	deep frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	None	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		108 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
16	x	No	No	0.091	0.3	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Carbofuran-D_3	2	91 % | 2	EUPT-blank	0.02 and 0.10 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
17	x	No	No	0.089	0.2	0.01	10	just thawed	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$	Yes, 1×	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		91 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
18		Yes	Scope	0.104	0.9	0.01	25	deep frozen	Ultra turrax, 2 min	water, H_2SO_4, aceton, EtOAc/ C_6H_{12}	NaCl	Yes, 1×, basic	derivatisation with ter. Butyl-methylether	Liq.-Liq. Part., Liq.-Liq.-Part., 1 liq/liq EtOAc, 2. liq/liq hexane		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		114 % | 2	EUPT-blank		GC-MSD	DB 5 column, m/z 401 quantifier, m/z 399 qualifier	DFG S24, Modification: DFG S24
19	x	Yes	Scope	0.080	-0.3	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Liq.-Liq. Part., Dessication with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1				LC-MS/MS (QQQ)	519/463, 519/391	QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	0.0793	-0.3	0.002	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	2	90 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Fenbutatine Oxide

Fenbutatine Oxide (Assigned value = 0.086 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
21		Yes	Scope	0.087	0.1	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, 1) Buffering 2) FA		Centrifugation, Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to extract ALIQUOTS		Yes, TPP	1	93 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.091	0.3	0.02	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaOAc/MgSO_4$	No		Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	2				LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: no PSA
24		Yes	Scope	0.068	-0.8	0.05	10	deep frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		99.3 % | 1	EUPT-blank		LC-MS		Analysis of Organotion Compounds via QuEChERS and LC-MS/MS, EURL-SRM, 2011
25		Yes	No	0.077	-0.4	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Isoprotu-ron-D_6	1	106 % | 1	EUPT-blank		LC-TOF		QuEChERS – Citrate buffered (EN 15662)
26		No	No	0.092	0.3	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	81 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
28	x	No	No	0.120	1.6	0.01	10	slightly frozen	Mech. shaking, 30 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			None		Std. spiked to MATRIX Extract	EUPT-Blank	No		75 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
29	x	Yes	Commodity	0.0875	0.1	0.05	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)	ESI-pos	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
30	x	Yes	Commodity	0.134	2.3	0.01	10	deep frozen	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×		Dispersive-SPE ($PSA/MgSO_4$)		Procedural calibr. (Corr. for Recov.)	Other Bank			100 % |			LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
33	x	Yes	Scope	0.097	0.5	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank	Multiple cali.	LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662), Modification: injection of Extract 1 - no dSPE
34		Yes	Scope	0.085	0.0	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	lettuce	Yes, Isoprotu-ron-D_6	1	65 % | 2	QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	FN	-3.5	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No			EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: centrifugation step at -5°C
39		Yes		0.083	-0.1	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		89 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
40		Yes	No	0.0845	-0.1	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No				Std. add. to extract ALIQUOTS	EUPT-Blank	No		102 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
41		Yes	Scope	0.082	-0.2	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	Yes, 1×, pH 4.5	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	46 % | 1	other strawberry	other strawberry	LC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth)
42		Yes	Scope	0.080	-0.3	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering	None	Centrifugation, Filtration		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Chlorpyri-fos-D_{10}	1	101 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
45		Yes	Commodity	0.0788	-0.3	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$), Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No			EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Fenbutatine Oxide

Fenbutatine Oxide (Assigned value = 0.086 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
46		No	No	0.0738	-0.6	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to Pure SOLVENT		Yes, other IS	1	110 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
47		Yes	Commodity	0.114	1.3	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	$NaOAc/MgSO_4$	No		Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, TPP	2	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: 0.5 % acid
49	x	No	No	0.0796	-0.3	0.01	10	cold	Man. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	No		87.2 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
50		Yes	Scope	0.087	0.1	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT		No		96 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
51		Yes	No	0.104	0.9	0.01	10	deep frozen	Mech. shaking, 25 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$), Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		73 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
52		Yes	Commodity	0.036	-2.3	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Pirimicarb-D_6, but not IS corrected, recovery only	1				LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662); not very well detectable, bad peak shape
53		Yes	Scope	0.111	1.2	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.103	0.8	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		97.4 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
58		Yes	No	0.0695	-0.8	0.01	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		82.6 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
63		Yes	Scope	0.231	6.8	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
66	x	Yes	No	0.0785	-0.3	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$), Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		55 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
67	x	No	No	0.068	-0.8	0.02	10	slightly frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	2	73.4 % | 1	EUPT-blank	0.3 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
70		No	Scope	0.065	-1.0	0.01	10	just thawed	Man. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		92.1 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.0679	-0.8	0.01	10	ambient	Ultra turrax, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
72		No	No	0.108	1.0	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Isoprotu-ron-D_6	1	98 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
74		Yes	Commodity	0.105	0.9	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Pirimicarb-D_6	1	101 % | 1	EUPT-blank		LC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Fenbutatine Oxide

Fenbutatine Oxide (Assigned value = 0.086 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
75	x	Yes	Scope	0.288	9.5	0.01	10	deep frozen	Man. shaking, 15 min	ACN	None	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		120 % | 4	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
76		Yes	Scope	0.072	-0.6	0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No			QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
77		Yes	No	0.076	-0.4	0.01	15	slightly frozen	Mech. shaking, 5 min		NaOAc/$MgSO_4$	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract		No		81 % | 1	EUPT-blank	0.01 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
78		Yes	Commodity	0.107	1.0	0.02	10	deep frozen	Ultra turrax, 3 min	Acetone, C_6H_{12}, EtOAc, C_6H_{12}/EtOAc 1:1	NaCl	No	None	GPC		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Carbenda-zim-D_4	2	116 % | 1	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	ESI-pos	S-19 (§64 LFGB L00.00-334)
79		Yes	Scope	0.074	-0.5	0.01	10	deep frozen	Ultra turrax, 30 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank			62 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
81	x	No	No	0.0695	-0.8	0.01	10	deep frozen	Ultra turrax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, $NaHCO_3$		Centrifugation, Filtration		Std. spiked to MATRIX Extract				94.2 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
83	x	Yes	Scope	0.020	-3.1	0.01	10	deep frozen	Mech. shaking, 2 min	ACN, none	None	No, None	None	Dispersive-SPE (PSA/$MgSO_4$), none		Std. add. to ex-tract ALIQUOTS		Yes, TPP	1	70 % | 3	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	QuEChERS extraction	QuEChERS – Citrate buffered (EN 15662); none
84		Yes	Commodity	0.100	0.7	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.080	-0.3	0.01	10	deep frozen	Mech. shaking, 20 min	ACN + 1 % FA (A-QuECHERS)	None	No		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Diazinon-D_{10}	1	70 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
89		Yes	No	0.076	-0.4	0.01	10	deep frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		87.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
90		No	No	0.095	0.4	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Other Bank	No		58 % | 1	other organic strawberry	0.100 mg/kg, other org. strawberry	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17); never analysed with this method corrected by recovery experiment
91	x	Yes	No	0.079	-0.3	0.01	10	ambient	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		93.1 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
92		Yes	Commodity	0.0842	-0.1	0.01	10	deep frozen	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Wa-ter/Solvent)	No					LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
93		Yes	No	0.085	0.0	0.01	10	cold	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	83 % | 1	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
94		Yes	Scope	0.079	-0.3	0.01	10	deep frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	Yes, 1×, see A-QuECHERS		Centrifugation, Filtration		Std. spiked to MATRIX Extract	Other Bank	No	1	94 % | 2	EUPT-blank		LC-MS/MS (QQQ)	1 µl inj.	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
95		Yes	Scope	0.073	-0.6	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to ex-tract ALIQUOTS		No		102 % | 5	QC validation data	Matrix: lemon	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Fenbutatine Oxide

Fenbutatine Oxide (Assigned value = 0.086 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added? 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
96	x	Yes	Scope	0.080	-0.3	0.01	10	just thawed	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, Pirimicarb-D_6	1				LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
97		Yes	Scope	0.104	0.9	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, citrate buffer	None	Freezing out, Dispersive-SPE ($PSA/MgSO_4$), Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorpyrifos-D_{10}	1	94 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
98	x	Yes	Commodity	0.0561	-1.4	0.01	10	cold	Man. shaking, 1 min	ACN		No				Std. spiked to MATRIX Extract	EUPT-Blank	No		81 % | 1	EUPT-blank		LC-MS/MS (QQQ)	LC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	FN	-3.5	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	95 % | 5	QC validation data	ongoing performance verification (0.05)	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	0.059	-1.2	0.01	10	cold	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
103	x	Yes	Scope	0.0951	0.4	0.01	5	just thawed	Mech. shaking, 3 min	ACN + 1 % FA (A-QuECHERS)	Other	No	None	None		Std. spiked to Pure SOLVENT		Yes, Fenbutatinoxide-D_{30}	1	101 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
104		No	No	0.0765	-0.4	0.01	10	cold	Mech. shaking, 25 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		86 % | 3	EUPT-blank		LC-MS/MS (QQQ)	ESI	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
106		No	No	FN	-3.5	0.01	10	ambient	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
107	x	Yes	No	0.107	1.0	0.01	10	cold	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 time with H_2SO_4	Acidic hydrolysis prior to or during extraction	Freezing out		Std. spiked to MATRIX Extract		Yes, TPP	1	96 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
109		Yes	Scope	0.086	0.0	0.01	10	ambient	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.10 mg/kg	LC-MS/MS (QQQ)	QQQ 6495 ifunnel Agilent	QuEChERS – Citrate buffered (EN 15662)
113		Yes	Scope	0.087	0.1	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank	Yes, Desmetryn	1	93 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Commodity	0.075	-0.5	0.01	25	just thawed	Mech. shaking, 2 min	MeOH	None	No		Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	No		99 % | 3	EUPT-blank		LC-MS/MS (QQQ)		MeOH extraction
116		Yes	No	0.107	1.0	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No		Filtration		Std. add. to extract ALIQUOTS		Yes, Tris(1,3-dicloroisopropyl) phosphate	1	110 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	2 MRM; ESI+	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
123		Yes	Commodity	0.080	-0.3	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (ODS)		Std. spiked to MATRIX Extract	EUPT-Blank	No		95 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
125		No	No	0.102	0.8	0.01	10	just thawed	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate-Buffer mix		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)						LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean-up step

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Fenbutatine Oxide

Fenbutatine Oxide (Assigned value = 0.086 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
126		No	No	0.036	-2.3	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)			80 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.078	-0.4	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	orange	No		96 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: The laboratory emploYes this method like reference method for the extraction
129		Yes	Scope	0.072	-0.6	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		102 % | 4	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
130		Yes	Scope	0.123	1.7	0.01	10	slightly frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.), Rec. Factor		Yes, TPP	1				LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
3rd-133		Yes	No	0.0893	0.2	0.01	5	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			Dispersive-SPE ($ODS/MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Chlorpyrifos-D_{10}	1	103.8 % | 2	EUPT-blank	Recovery based on matrix blank 0.01 mg/kg.	LC-Orbitrap	m/z 519.20682 $[C_{30}H_{39}Sn]+$	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: Quantitative analysis - standard solution five point calibration (after matrix-matched screening analysis)
3rd-134		Yes	No	0.090	0.2	0.09	10	ambient	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaOAc/MgSO_4$		None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, other IS	1				LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
3rd-136		Yes	Commodity	0.0899	0.2	0.01	10	deep frozen	Man. shaking, 3 min	ACN + 1 % FA (A-QuECHERS)	None		None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		90.8 % | 3	EUPT-blank	compound used for spiking	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: Extracted by 10 ml of 1 % FA in acetonitilre and of 4 g $MgSO_4$ and 1 g NaCl for partitioning. No cleanup was conducted
3rd-138		No	No	0.110	1.1	0.05	10	just thawed	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank			106 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-139		No	Commodity	0.249	7.6	0.01	10	deep frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$		None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1				LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Folpet (parent)

Folpet (parent) (Assigned value = 0.334 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.190	-1.7	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to extract ALIQUOTS		Folpet	No					GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.349	0.2	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, other IS	1	99.3 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Scope	0.292	-0.5	0.02	50	ambient	Mech. shaking, 2 min	Acetone, 100 ml Acetone	None	No	Liq.-Liq.-Part., add 30 ml NH_4Cl(1 %) + ortho-Pacid(1 %), liq-liq (ether)		Std. spiked to MATRIX Extract	EUPT-Blank		No		84 % | 1	EUPT-blank		GC-MS/MS (QQQ)		100 ml acetone, mechanical shaking, filtration, add of 30 ml acid ortho-P to 30 ml of the extract, wait 30 min. Liq-liq, filtration with Na_2SO_4
4		Yes	Commodity	0.295	-0.5	0.01	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, sodium hydrogen carbonate	GPC, Envirosep HPGPC column		Std. spiked to MATRIX Extract	other organic strawberry	Folpet	Yes, Triflura-lin D_{14}	2	100 % | 1	other organic strawberry	0.02 mg/kg, org. strawberry	GC-MS/MS (QQQ)	3 MRM	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
6	x	Yes	No	0.317	-0.2	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank		No		44.2 % | 3	EUPT-blank	(42.2 - 41.5 - 49.1)%	GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662), Modification: ACN extract evaporated and reconstituted with isooctane:toluene (90:10); Note: the result is corrected by recovery
7		Yes	Scope	0.286	-0.6	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer pH 5.5	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		Yes, Folpet-D_4	1				GC-TOF	EI	Quantification of Residues of Folpet and Captan in QuEChERS Extracts Version 3.1 (last update: 06.04.17)
9		Yes	No	0.172	-1.9	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		59 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
12		Yes	No	0.420	1.0	0.01	10	ambient	Man. shaking, 1 min	ACN		No	Centrifugation					Yes, other IS	1	87 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
13	x	Yes	Scope	0.292	-0.5	0.02	18	deep frozen	Ultra turrax, 3 min	EtOAc, 100 ml	None	No	Centrifugation, GPC, 5 min at 4000rpm		Std. spiked to MATRIX Extract, 5 points	EUPT-Blank		No		106 % | 3	other strawberry	other strawberry	GC-(μ) ECD	Agilent 6890	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
14		Yes	No	0.355	0.2	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet	Yes, Atrazine-D_5	1	96 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
15		Yes	Scope	0.290	-0.5	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		Yes, TPP	3	100 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
17	x	Yes	Scope	0.298	-0.4	0.01	10	slightly frozen	Man. shaking, 2 min	ACN, EtOAc	None	No	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Phenan-threne-D_{10}	2	99 % | 1	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: RP-SPE cleanup step
18		Yes	Scope	0.382	0.6	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, Folpet-D_4	1	99 % | 2	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	0.413	0.9	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Liq.-Liq. Part., Dessication with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Folpet-D_4	1				GC-TOF		QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	0.401	0.8	0.01	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	Yes, 1×, addition of H_2SO_4, pH 1	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3	98 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	0.349	0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 2×, 1) Buffering; 2) FA	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS		Folpet	Yes, ILIS	1	96 % | 1	EUPT-blank		GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.386	0.6	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaOAc/MgSO_4$		Centrifugation			None (pure Water/Solvent)		Yes, Captan-D_6	2	90 % |					QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
23		Yes	No	0.040	-3.5	0.025	15	just thawed	Man. shaking, 30 min	EtOAc	Other	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		-% | 2			GC-MSD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
24		Yes	Scope	0.333	0.0	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		91.5 % | 1	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Folpet (parent)

Folpet (parent) (Assigned value = 0.334 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
25		Yes	No	0.449	1.4	0.04	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Bromophos methyl	1	82 % | 1	EUPT-blank		GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662)
26		No	No	0.950	7.4	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Folpet	Yes, Anthracene	1	100 % | 2	slope of std. add. to sample portions		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
27		No		0.0759	-3.1	0.01	10	deep frozen	Ultra turrax, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
29	x	Yes	Commodity	0.163	-2.1	0.01	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		77 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
30	x	Yes	Scope	0.453	1.4	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×	Freezing out, Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank				100 % |			GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
31		Yes		0.321	-0.2	0.01	10	just thawed	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)				74 % | 2			GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
32		Yes	Scope	0.373	0.5	0.01	10	cold	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 2×, by buffering and acid (FA) addition	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, ILIS	2				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
33	x	Yes	Scope	0.340	0.1	0.01	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, Captan-D_6	1	99 % | 1	EUPT-blank	Multiple cali.	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	0.559	2.7	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Folpet	Yes, Folpet-D_4	1		EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: centrifugation step at -5°C
37		No		0.320	-0.2	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No			QC validation data		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
38		Yes	No	0.320	-0.2	0.02	15	just thawed	Ultra turrax, 15 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Triphenylphosphine	1	104 % | 1	EUPT-blank		GC-(μ) ECD	confirmed br GC-Ion trap (MS/MS)	Mini-Luke-Type (Acetone DCM-PE)
39		Yes		0.360	0.3	0.02	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, bromophos	1	94.8 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: clean up
40		No	No	0.619	3.4	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		105 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
41		Yes	Scope	0.230	-1.2	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet	Yes, TPP	1	38 % | 1	other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	0.260	-0.9	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, Buffering	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Folpet	Yes, Chlorpyrifos-D_{10}	1	101 % | 1	EUPT-blank		GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662)
44	x	No	Scope	0.305	-0.4	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TDCPP	1	85 % | 2	EUPT-blank	0.1 mg/kg	GC-MSD	SIM mode	QuEChERS – Citrate buffered (EN 15662), Modification: acidified ACN(1 % HOAc)
45		Yes	No	0.462	1.5	0.02	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$	Yes, 1×, Add 100 µL H_2SO_4 (conc) to sample homogenate	None		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, TPP	1	54 % | 1	other blank	0.2 mg/kg	GC-MS/MS (QQQ)	EI pos	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Folpet (parent)

Folpet (parent) (Assigned value = 0.334 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
46		Yes	No	0.326	-0.1	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT, Rec. Factor		Folpet and Phthalimide (separately)	Yes, other IS	2	48 % | 1	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
47		Yes	No	0.260	-0.9	0.02	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	NaOAc/$MgSO_4$	No	Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME		Yes, Ethyl-parathion-D_{10}	2	66 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		Yes	Scope	0.329	-0.1	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TDCPP	1	82 % | 2	EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.225	-1.3	0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		102.2 % | 1	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662); analysed by GC-ECD because of GC-MS/MS malfunction
50		Yes	Scope	0.379	0.5	0.02	10	deep frozen	Mech. shaking, 30 min	EtOAc	None	No	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-28	2	102 % |	EUPT-blank		GC-(μ) ECD		in house method
52		Yes	Commodity	0.862	6.3	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, TPP, but not IS corrected, recovery only	1	107 % | 1	EUPT-blank	0.5 mg/kg	GC-MS/MS (QQQ)	Addition of Analytical Protect. before measurement	QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.326	-0.1	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet	Yes, PCB-31	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
54		Yes	No	0.269	-0.8	0.01	10	deep frozen	Mech. shaking, 2 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, 10ul 5 %FA in acetonitrile into 1 ml extract added	Dispersive-SPE (PSA/GCB/$MgSO_4$), 6 ml of extract into 15 ml tube PSA/GCB/$MgSO_4$		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
56		Yes	Scope	0.304	-0.4	0.01	10	cold	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No		91.8 % | 2	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.270	-0.8	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		70 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	No	0.271	-0.8	0.01	10	slightly frozen	Man. shaking, 1 min	EtOAc	Other	No	Dispersive-SPE (other); $MgSO_4$/C18/PSA		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, TDCPP	1	76.3 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Not buffered, partitioning salt: Na_2SO_4 (10 g)
61		No	No	0.385	0.6	0.005	10	deep frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.), Other	EUPT-Blank	Folpet	Yes, Folpet-D_4	1		EUPT-blank	rec. to check meth. performance	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
62	x	Yes	No	0.377	0.5	0.05	10	ambient	Man. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	2	85 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no PSA Clean-up
63		Yes	Scope	0.085	-3.0	0.01	10	ambient	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)								LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	0.350	0.2	0.005	10	deep frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, ILIS	1	82 % | 1	EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
66	x	Yes	No	0.440	1.3	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet	Yes, Aldrin	2	113 % | 2	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Folpet (parent)

Folpet (parent) (Assigned value = 0.334 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
67	x	Yes	Scope	0.286	-0.6	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)			Yes, PCB-209	2	123 % | 1	EUPT-blank	0.2 mg/kg	GC-(μ) ECD		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: solvent exchange before ECD analysis
69		Yes	No	0.362	0.3	0.02	10	slightly frozen	Ultrasonic bath, 30 min	Acetone	None	No	Clena up 1 (SDVB), followed by SPE-column (ion exchange)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3	72 % | 3	EUPT-blank		GC-MSD		acetone extraction, water adition, SPE (SDVB, PSA)
70		No		0.330	-0.1	0.01	10	just thawed	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (other); $PSA/C18/MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Folpet	Yes, TDCPP	1	137.4 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
72		Yes	No	0.434	1.2	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None		Std. spiked to MATRIX Extract	organic lettuce/pepper	Folpet	Yes, Chlorpyrifos-D_{10}	1	112 % | 2	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
73	x	No	No	0.365	0.4	0.02	10	slightly frozen	Ultrasonic bath, 10 min	Acetone, CH_2Cl_2, petroleum ether	None	No			Std. spiked to MATRIX Extract	EUPT-Blank				85 % | 3	EUPT-blank		GC-(μ) ECD		Mini-Luke-Type (Acetone DCM-PE)
74		Yes	Commodity	0.344	0.1	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Parathion-d10	1	93 % | 1	EUPT-blank		GC-(μ) ECD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time
75	x	Yes	Scope	0.371	0.4	0.01	10	deep frozen	Mech. shaking, 15 min	EtOAc, C_6H_{12}, mix 1/1	None	No	GPC		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Ditalimfos	2	82 % | 3	EUPT-blank		GC-MSD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: extr. solvent (etac) replaced with chex/etac 1/1 mixture
76		Yes	Scope	0.360	0.3	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet	Yes, PCB-31	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
77		No	No	0.296	-0.5	0.01	15	slightly frozen	Mech. shaking, 15 min		$NaCl/MgSO_4$	No			Std. add. to sample PORTIONS (Corr. for Recov.)		Captan			91 % | 3	slope of std. add. to sample portions	0.05; 0.10; 0.20 mg/kg	GC-Ion Trap		EtOAc + 1 % HOAc
78		Yes	Commodity	0.377	0.5	0.01	10	deep frozen	Ultra turrax, 3 min	Acetone, C_6H_{12}, EtOAc, C_6H_{12}/EtOAc 1:1	NaCl	No	GPC, silica column		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		92.9 % | 1	EUPT-blank	0.3 mg/kg	GC-MS/MS (QQQ)		S-19 (§64 LFGB L00.00-334)
83	x	Yes	Scope	0.440	1.3	0.01	50	deep frozen	Man. shaking, 5 min	EtOAc	None	No	None, none		Std. add. to extract ALIQUOTS			No		80 % | 3	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)	Extr. 200 ml EtOAc	extraction EtOAc 200 ml, Vol final 10 ml; none
84		Yes	Commodity	0.320	-0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, ILIS	1	95 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.231	-1.2	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	None		Std. spiked to MATRIX Extract		Folpet	Yes, Folpet-D_4	1	96 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.301	-0.4	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Propiconazole-D_5	1	120 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		No	No	0.253	-1	0.05	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	Other Bank	Folpet	No					GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: injection was performed in toluene instead of acetonitrile (solvant was exchanged); difficulties for analysing it
91	x	Yes	Commodity	0.360	0.3	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No		99.6 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
92		Yes	Commodity	0.355	0.2	0.01	10	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet	No					GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Folpet (parent)

Folpet (parent) (Assigned value = 0.334 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
93		Yes	Commodity	0.287	-0.6	0.01	10	cold	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, TPP	1	83 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
94		Yes	Scope	0.346	0.1	0.02	50	deep frozen	Mech. shaking, 5 min	MeOH, CH_2Cl_2, EtOAc/C_6H_{12}		No	GPC		Std. spiked to MATRIX Extract	Other Bank	Folpet	Yes, Mirex	2	92 % | 2	other blank		GC-(µ) ECD	1 µl inj.	S-19 (§64 LFGB L00.00-334)
95		Yes	Scope	0.751	5.0	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, ascorbic acid before GC	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS, Other	strawberry purée	Folpet	Yes, Folpet-D_4	2	90 % | 1	EUPT-blank		GC-MS/MS (QQQ)	analytical column: HP 5-MS	QuEChERS – Citrate buffered (EN 15662), Modification: at the end of procedure the extract is treated with ascorbic acid as analytical protectant instead of FA
96	x	Yes	Scope	0.117	-2.6	0.01	10	just thawed	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation, In addition filtration		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		Yes, Aldrin	1				GC-MSD	technical problems!	QuEChERS – Citrate buffered (EN 15662)
97		Yes	Scope	0.424	1.1	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, citrate buffer	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Captan-D_6	1	80 % | 2	slope of std. add. to sample portions	near the result	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no PSA for CleanUp
98	x	Yes	Commodity	0.141	-2.3	0.01	10	cold	Man. shaking, 1 min	ACN			Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Captan-D_6	1	82 % | 1	EUPT-blank		GC-MS/MS (QQQ)	GC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	0.375	0.5	0.02	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, TPP	1	96 % | 5	QC validation data	0.05 mg/kg to blueberry	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	FN	-3.9	0.01	10	cold	Mech. shaking, 30 min	ACN	None	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Folpet-D_4	1				GC-MS/MS	GC-CI-MS	Single Residue Methods, Analyses of Captan and Folpet via QuEChERS and GC-MS(CI)
103	x	Yes	Scope	0.440	1.3	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None		Std. spiked to Pure SOLVENT, Rec. Factor	EUPT-Blank	Folpet	No		45 % | 1	EUPT-blank	40 µg/kg	GC-(µ) ECD	30 m x 0,25 mm i.d., VF-5ms, 0,25 µm (Agilent)	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	Scope	0.328	-0.1	0.01	10	cold	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		92 % | 3	EUPT-blank		GC-(µ) ECD		QuEChERS – Citrate buffered (EN 15662)
105	x	Yes	Scope	0.450	1.4	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration, Filtration through anhydrous sodium sulfate		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No			EUPT-blank		GC-(µ) ECD	GCMSMS confirmation (as phtalimide)	Mini-Luke-Type (Acetone DCM-PE)
106		No	No	FN	-3.9	0.01	10	ambient	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
107	x	Yes	Commodity	0.307	-0.3	0.01	10	cold	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Freezing out		Std. spiked to Pure SOLVENT			Yes, TPP	1	103 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
108		Yes	Scope	0.350	0.2	0.01	10	deep frozen	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	1	91 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
109		Yes	No	0.351	0.2	0.01	10	ambient	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet	Yes, Folpet-D_4	1	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	Chemical Ionization QQQ Quantum Thermo	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
110		No	No	1.23	10.7	0.01	15	cold	Mech. shaking, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation		Std. spiked to MATRIX Extract			No		83 % | 5	EUPT-blank		GC-Ion Trap		Mini-Luke-Type (Acetone DCM-PE)
112		No	No	0.132	-2.4	0.01	10	ambient	Mech. shaking, 1 min	ACN, C_6H_{12}	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to MATRIX Extract			No			EUPT-blank		GC-Ion Trap		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
113		Yes	Scope	0.285	-0.6	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank		Yes, Desmetryn, Mirex	1	94 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Folpet (parent)

Folpet (parent) (Assigned value = 0.334 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
115		Yes	Scope	0.347	0.2	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, PCB-153	1	82 % | 3	EUPT-blank		GC-(μ) ECD		Mini-Luke-Type (Acetone DCM-PE)
116		Yes	No	0.246	-1.1	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. add. to extract ALIQUOTS		Folpet	Yes, Folpet-D_4	2	63 % | 1	EUPT-blank	0.3 mg/kg	GC-MS/MS (QQQ)	2 MRM; EI	QuEChERS – Citrate buffered (EN 15662)
117		Yes	Commodity	0.258	-0.9	0.01	10	ambient	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to extract ALIQUOTS			Yes, TPP	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
118		No	Scope	0.292	-0.5	0.05	10	just thawed	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Folpet	No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
120		Yes		0.330	-0.1	0.2	10	deep frozen	Man. shaking, 30 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	cucumber		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
124	x	Yes	Scope	0.323	-0.1	0.01	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Pet. Ether	None	No	Dessication with Na_2SO_4, Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		No		106.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
125		No	No	0.526	2.3	0.01	10	just thawed	Mech. shaking, 15 min	EtOAc	NaCl/$MgSO_4$	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Folpet						GC-MS/MS (QQQ)	Cool On Column	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: 10 g sample + 10 ml EtAc + 8 g $MgSO_4$ + 1.5 g NaCl
126		No	No	0.295	-0.5	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	NaCl/$MgSO_4$	No	GPC		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet	Yes, TPP	1	95.2 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.375	0.5	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet	Yes, Folpet-D_4	1	93 % | 1	EUPT-blank		GC-MSD	Bruker 320 - Bruker 450GC	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: The laboratory employes this method like reference method for the detection mode (NCI)
129		Yes	No	0.259	-0.9	0.01	15	deep frozen	Mech. shaking, 15 min	15 ml 1 % Hac in MeCN	NaOAc/$MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No		75 % | 4	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
130		Yes	Scope	0.389	0.7	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	Centrifugation		Std. add. to extract ALIQUOTS		Folpet and Phthalimide (separately)	Yes, Folpet-D_4	2				GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
3rd-132		Yes	Scope	0.394	0.7	0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-31	2	86 % | 2	slope of std. add. to sample portions		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-133		Yes	Scope	0.355	0.2	0.01	5	deep frozen	Mech. shaking, 15 min	ACN + 1 % HOAc	NaOAc/$MgSO_4$		Dispersive-SPE (ODS/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet	Yes, Captan-D_6	1	97.2 % | 2	EUPT-blank	Recovery based on matrix blank 0.05 mg/kg.	LC-Orbitrap	m/z 312.93666 $[M+NH_4]+$	QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Quantitative anlaysis - standard solution five point calibration (parallel quantitative analysis by EI-GC-MS/MS and LC-Q-Orbitrap)
3rd-136		Yes	Commodity	0.665	4.0	0.02	10	deep frozen	Man. shaking, 3 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		No		117.3 % | 3	EUPT-blank	compound used for spiking	GC-(μ) ECD		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: Extracted by 10 ml of 1 % FA in acetonitilre and of 4 g $MgSO_4$ and 1 g NaCl for partitioning. No cleanup was conducted.
3rd-138		No	No	0.745	4.9	0.01	10	just thawed	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank				93 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-139		No	Scope	0.0953	-2.9	0.01	2	deep frozen	Mech. shaking, 2 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Triphenyl-methane	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Glyphosate

Glyphosate (Assigned value = 0.306 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.629	4.2	0.1	10	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. add. to extract ALIQUOTS		No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
2		Yes	Scope	0.317	0.1	0.03	5	deep frozen	Mech. shaking, 30 min	CH_2Cl_2	None	No	Derivatization with FMOC	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	Yes, ILIS	1	96.4 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
3	x	Yes	Scope	0.320	0.2	0.02	1	ambient	Ultra turrax, 1 min	MeOH, H_2O, CH_2Cl_2	None	No	Derivatization with FMOC, addition of 1 ml of borate buffer at pH 9 and 1 ml of FMOC-Cl at 20 mg/ml	Centrifugation, Filtration, filtration on 0.2 µm PDVF filter		Std. spiked to Pure SOLVENT, Other	None (pure Water/Solvent)	Yes, Glyphosate-$^{13}C,^{15}N$	1	97.2 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
6	x	Yes	No	FN	-3.6	0.1	10	slightly frozen	Man. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to MATRIX Extract	Test Item (std. add. approach)	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
7		No	Scope	0.355	0.6	0.03	10	cold	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	1		slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
8		Yes	No	0.394	1.1	0.05	10	just thawed	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		95 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
9		Yes	No	0.779	6.2	0.05	10	deep frozen	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
10		Yes	No	0.312	0.1	0.03	10	slightly frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Freezing out, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	1	86 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
12		No	Scope	0.300	-0.1	0.01	5	ambient		H_2O								Yes, ILIS	1				LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
13	x	Yes	Scope	0.290	-0.2	0.01	10	deep frozen	Mech. shaking, 5 min	H_2O, CH_2Cl_2, 40 ml water and 40 ml CH_2Cl_2	None	No	Derivatization with FMOC, 30 min mechanical shaking with FMOC, pH adjustment with FA, pH = 6	HLB Oasis, evaporating under nitrogen		Procedural calibr. (Corr. for Recov.), 3 points	EUPT-Blank	Yes, Glyphosate-$^{13}C,^{15}N$	1	99.9 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Agilent 6460	Glyphosate: Method involving deriv. w. FMOC
14		Yes	No	0.311	0.1	0.03	3	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	1	104 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: 2.5g
16	x	Yes	No	0.240	-0.9	0.03	3	slightly frozen	Mech. shaking, 30 min	H_2O	None	No	None	Centrifugation, Filtration, Filter 0.2 µm		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	2	90 % | 2	EUPT-blank	0.02 and 0.10 mg/kg	LC-MS/MS (QQQ)		Internally developed method for glyphosat and AMPA in food and feed
17	x	Yes	No	0.331	0.3	0.01	10	just thawed	Man. shaking, 2 min	MeOH	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, ILIS	1	92 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Glyphosate

Glyphosate (Assigned value = 0.306 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
18		Yes	Scope	0.299	-0.1	0.002	2	deep frozen	Mech. shaking, 30 min	0,1M HCl	None	No	Derivatization with FMOC	Liq.-Liq. Part., followed by SPE-Column (OASIS HLB cartrige)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Glyphosate-$^{13}C,^{15}N$	1	101 % | 2	EUPT-blank		LC-MS/MS (QQQ)	m/z 390/168	Glyphosate: Method involving deriv. w. FMOC, Modification: Extrac.with 0,1 ml/L HCL; liq/liq extrac. with Dichlorom.; Cleanup OASIS HLB col.; Deriv. FMOC; autom.SPE C18; LC-MS/MS
19	x	Yes	Scope	0.291	-0.2	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)		No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-2-^{13}C	1				LC-MS/MS (QQQ)	168/63, 168/81, 168/150	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
20		Yes	Commodity	0.299	-0.1	0.01	10	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	1	101 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
21		Yes	Scope	0.279	-0.4	0.01	5	deep frozen		1 % FA in Methanol/ Water (50/50)		Yes, 3×, 1) addition of FA, 2) buffering with borate, 3) addition of FA	Derivatization with FMOC	Centrifugation		Std. spiked to Pure SOLVENT		Yes, Glyphosate-^{13}C	1	100 % | 1			LC-MS/MS (QQQ)	FMOC-Chloride; ESI-pos	Glyphosate: Method involving deriv. w. FMOC
22		Yes	Scope	0.360	0.7	0.1	10	slightly frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
23		Yes	No	0.180	-1.6	0.18	10	slightly frozen	Man. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)		Yes, 1×, borate buffer pH = 9 (using 0.1M HCl)	Derivatization with FMOC	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		-% | 2			LC-MS/MS (QQQ)	MF A:1 % HOAc in Water + 5 %MeOH	Glyphosate: Method involving deriv. w. FMOC
25		Yes	No	0.370	0.8	0.04	10	slightly frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		125 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
26		No	No	0.250	-0.7	0.01	3	deep frozen	Mech. shaking, 20 min	water 0.1 % FA, CH_2Cl_2	None	No		Centrifugation, SPE-column (C18)		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	No		100 % | 2	slope of std. add. to sample portions		LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
28	x	No	No	0.259	-0.6	0.1	10	slightly frozen	Mech. shaking, 30 min	H_2O	None			SPE-column (ion exchange), SPE-column (ion exchange), cation and anion exchange cartridges		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-$^{13}C,^{15}N$	1	40 % | 1	EUPT-blank		LC-MS/MS (QQQ)		water extraction and SPE clean up
30	x	Yes	Commodity	0.299	-0.1	0.03	10	deep frozen		MeOH w. 1 % FA (QuPPe solvent)		Yes, 1×				Procedural calibr. (Corr. for Recov.)	Other Bank	Yes, ILIS	1	100 % |			LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
32		Yes	Scope	0.297	-0.1	0.05	10	cold	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent), H_2O, 1 ml	None	Yes, 1×, by extraction solvent	None	Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, ILIS	2				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
33	x	Yes	Scope	0.289	-0.2	0.04	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank	Multi-cali.	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides); traces <<< RL found in blank material; QuPPe method confirmed via FMOC-derivatization
34		Yes	No	0.314	0.1	0.01	10	ambient	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to MATRIX Extract	lettuce	Yes, Glyphosate-$^{13}C,^{15}N$	1	65 % | 2	other blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Glyphosate (Assigned value = 0.306 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
35	x	No	No	0.268	-0.5	0.03	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1		EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
38		No	No	0.130	-2.3	0.05	10	slightly frozen	Man. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		89 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
39		Yes		0.282	-0.3	0.05	10	slightly frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		102 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
40		Yes	No	0.199	-1.4	0.1	5	slightly frozen	Man. shaking, 2 min	H_2O		No	Derivatization with FMOC	SPE-column (ion exchange)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, ILIS	1				LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
41		Yes	Scope	0.320	0.2	0.03	10	ambient	Mech. shaking, 20 min	Methanol + 1 % Hac			None	Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Glyphosate-^{13}C,^{15}N	1	108 % | 1	other strawberry	other strawberry	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
42		Yes	Scope	0.275	-0.4	0.01	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	97 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
43		Yes	Scope	0.246	-0.8	0.03	20	deep frozen	Man. shaking, min	HCl 0.1M, CH_2Cl_2				Centrifugation, CHELEX100/AG 1-X8			None (pure Water/Solvent)	No		80 % | 1	EUPT-blank		LC-FLD (Fluorescence)		Glyphosate: Method involving post-column deriv. w. OPA (DFG-405 type)
45		Yes	No	0.301	-0.1	0.05	3	deep frozen	Ultrasonic bath, 10 min	H_2O	None	Yes, 2×, 0.5 M borate buffer. 2.5 M sulphuric acid	Derivatization with FMOC	Liq.-Liq. Part., Liq.-Liq.-Part., CH_2Cl_2: 2-propanol (3+1)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Glyphosate-^{13}C	1		EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	ESI-pos	Glyphosate: Method involving deriv. w. FMOC
46		No	No	0.235	-0.9	0.01	10	deep frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to Pure SOLVENT		Yes, ILIS	1	106 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
47		Yes	Commodity	0.323	0.2	0.01	3	deep frozen	Mech. shaking, 5 min	MeOH, H_2O	None	No		Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, ILIS	1	109 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
48		Yes	Scope	0.239	-0.9	0.01	10	slightly frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
49	x	Yes	Scope	0.396	1.2	0.02	10	cold	Man. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	No		90.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
52		Yes	Commodity	0.388	1.1	0.05	10	deep frozen	Mech. shaking, 45 min	MeOH w. 1 % FA (QuPPe solvent)		No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
53		Yes	Scope	0.280	-0.3	0.01	3	deep frozen	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
57		No	No	1.30	13.0	0.03	10	deep frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		100 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
58		No	No	0.255	-0.7	0.05	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Derivatization with FMOC	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	100 % |			LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: QuPPe+derivatization with FMOC

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Glyphosate

Glyphosate (Assigned value = 0.306 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
60		Yes	Commodity	0.313	0.1	0.01	5	slightly frozen	Mech. shaking, 60 min	0,1 m HCl	None	Yes, 2×, 0,1 m NaOH; 8,5 % $H3PO_4$	Derivatization with FMOC	SPE-column (ion exchange)		Std. spiked to MATRIX Extract	EUPT-Blank	No		98.2 % | 2	EUPT-blank	0.7 mg/kg	LC-FLD (Fluorescence)		Glyphosate: Method involving deriv. w. FMOC
62	x	No	No	0.256	-0.7	0.05	5	cold	Man. shaking, 30 min	H_2O		No	Derivatization with FMOC	Centrifugation, SPE-column (C18), condition: 2 ml MeOH - 2 ml H_2O - flow-through SPE		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No		92 % | 1	QC validation data		LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC, Modification: SPE clean-up (HLB)
64		Yes	Scope	0.418	1.5	0.05	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 2×, Methanol w. 1 % FA, addition of 50ul 1 % FA in ACN to vial		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	82 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
66	x	Yes	No	0.281	-0.3	0.03	10	slightly frozen	Ultrasonic bath, 10 min	H_2O, CH_2Cl_2		Yes, 3×	Derivatization with FMOC	Liq.-Liq. Part., Dessication with Na_2SO_4		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1				LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
67	x	No	No	0.485	2.3	0.05	10	slightly frozen	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)		No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		101.4 % | 1	EUPT-blank	0.5 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: no ILIS was used
68		Yes	No	0.055	-3.3	0.01	10	deep frozen	Mech. shaking, 30 min	H_2O	None	No	Derivatization with FMOC	SPE Column (HLB)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, ILIS	3				LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
70		Yes		0.283	-0.3	0.1	10	just thawed	Man. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. add. to extract ALIQUOTS, Other	EUPT-Blank	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
71		Yes	No	0.326	0.3	0.01	10	ambient	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
72		Yes	Commodity	0.325	0.2	0.05	2	deep frozen	Mech. shaking, 5 min	H_2O, MeOH, 1 % Acetic Acid		No	Derivatization with FMOC	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Glyphosate-D_3	1	91 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
73	x	No	No	0.359	0.7	0.3	10	slightly frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)		No				Std. spiked to MATRIX Extract	EUPT-Blank			70 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
74		No	No	0.228	-1.0	0.02	10	cold	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Glyphosate-^{13}C,^{15}N	1	83 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
75	x	No	No	0.288	-0.2	0.03	10	deep frozen	Man. shaking, 15 min	MeOH	None	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		120 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
76		Yes	Scope	0.268	-0.5	0.01	10	cold	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No				Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No			QC validation data		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
78		No	No	0.510	2.7	0.05	5	deep frozen	Ultra turrax, 2 min	MeOH	None	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		128.9 % | 1	EUPT-blank	0.6 mg/kg	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: extraction with MeOH
79		Yes	No	0.270	-0.5	0.05	2	deep frozen	Man. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No				Std. spiked to Pure SOLVENT	None (pure Water/Solvent)			80 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Glyphosate

Glyphosate (Assigned value = 0.306 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added? 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
81	x	No	Commodity	0.266	-0.5	0.05	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, 1 % FA in MeOH		Centrifugation, Filtration		Std. spiked to MATRIX Extract		No		95.3 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Different L-Chromatography conditions - in house LC methods
83	x	Yes	Scope	0.170	-1.8	0.03	10	deep frozen	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent), none	None	No	None	None, none		Std. add. to extract ALIQUOTS		Yes, Glyphosate-$^{13}C,^{15}N$	1	90 % | 3	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	Extr. CH3OH acidify 1 % FA	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides); none
84		Yes	Commodity	0.280	-0.3	0.03	2	deep frozen	Mech. shaking, 15 min	H_2O	None	No	Derivatization with FMOC, 3 ml aqueous extract: derivatization 20 mg FMOC-Cl in 2 ml ACN	Liq.-Liq. Part., acidification pH 0, phase separation NaCl/$MgSO_4$		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
86		Yes	Scope	0.456	2.0	0.03	1	deep frozen	Mech. shaking, 45 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to Pure SOLVENT		Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	1	78 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
88		Yes	No	0.312	0.1	0.03	5	deep frozen	Man. shaking w. intervals, 20 min	H_2O, MeOH, CH_2Cl_2	None	Yes, 1×, pH = 9 for derivation FMOC	Derivatization with FMOC	SPE-column (C18)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-$^{13}C,^{15}N$	1	74 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
89		No	No	0.322	0.2	0.01	10	deep frozen	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		99.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
90		Yes	Commodity	0.271	-0.5	0.05	10	deep frozen	Mech. shaking, 15 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to MATRIX Extract	Other Bank	Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	1	81 % | 1	other organic strawberry	other org. strawberry, 0.100 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
92		Yes	Commodity	0.346	0.5	0.03	10	deep frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
94		Yes	Scope	0.364	0.8	0.02	10	deep frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		Freezing out, Centrifugation		Std. spiked to MATRIX Extract, Other	Other Bank	Yes, Glyphosate-$^{13}C,^{15}N$	1	99 % | 2	EUPT-blank		LC-MS/MS (QQQ)	5 µl inj.	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
95		Yes	Scope	0.350	0.6	0.03	2	slightly frozen		1.H_2O+0,6 % HOAc		look Extr./ Part. Details	with Heptafluorobutanol+Trifluoraceticacid anhydride	Centrifugation, SPE-column (ion exchange), ionexchange column: Dowex AG 50W-X8		Std. add. to extract ALIQUOTS, Std. add. after extr./ion exchange, before derivatsaion		Yes, Glyphosate-$^{13}C,^{15}N$	3	74 % | 5	QC validation data	matrix honey	GC-MS/MS (QQQ)	analytical column: HP 5-MS	after extraction derivation with Heptafluorobutanol and TrifluorHOAc anhydride (BfR-Method Steinborn et.al.)
96	x	Yes	Scope	0.284	-0.3	0.03	10	just thawed	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, Glyphosate-1,2-$^{13}C_2,^{15}N$	1				LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
97		Yes	Commodity	0.775	6.1	0.01	2	cold	Mech. shaking, 20 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None		None	Freezing out, Centrifugation, Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-$^{13}C,^{15}N_2$	1	85 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
98	x	No	Commodity	0.301	-0.1	0.03	10	cold	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)				None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-$^{13}C,^{15}N$	1	99 % | 1	EUPT-blank		ICP-MS	IC LC-MS/MS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Used ion chromatography instead of the columns recommended in the official QUPPE method

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Glyphosate

Glyphosate (Assigned value = 0.306 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added? 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
99		Yes	Scope	0.200	-1.4	0.02	10	deep frozen	Man. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	86 % | 1	EUPT-blank	0.1 mg/kg to EUPT Blank	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
102		No	Scope	0.290	-0.2	0.01	2	cold	Mech. shaking, 30 min	H_2O/MeOH 3:1	None	No	Derivatization with FMOC	Centrifugation		Procedural calibr. (Corr. for Recov.)	wheat blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1				LC-MS/MS (QQQ)		Glyphosate: Method involving deriv. w. FMOC
103	x	Yes	No	0.295	-0.1	0.02	5	just thawed	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to Pure SOLVENT	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	108 % | 1	EUPT-blank	50 µg/kg	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
104		No	No	0.341	0.5	0.03	10	cold	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		88 % | 3	EUPT-blank		LC-MS/MS (QQQ)	ESI	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
106		No	No	0.35	0.6	0.01	10	ambient	Mech. shaking, 15 min	H_2O		No	Derivatization with FMOC	SEP-Column		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-^{13}C,^{15}N	1		EUPT-blank		LC-MS/MS (QQQ)		derivatization/SPE, Modification: derivatization/SPE
107	x	Yes	No	0.212	-1.2	0.03	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)		No				Std. spiked to Pure SOLVENT		Yes, Glyphosate-^{13}C,^{15}N	1	86 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
108		Yes	Scope	0.193	-1.5	0.02	10	deep frozen	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-^{13}C,^{15}N	1	92 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
109		Yes	No	0.260	-0.6	0.01	2	ambient	Mech. shaking, 1 min	Water 0.1 % FA	None	Yes, 1×, Water 0.1 % FA	None	supernatant was passed-through Oasis HLB cartridge		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	2	100 % | 3	EUPT-blank	0.01, 0.05, 0.10 and 0.5 mg/kg	LC-MS/MS (QQQ)	QQQ 6470 Agilent	SiCA method - Acidif. w. 0.1 % FA in H_2O
113		Yes	Scope	0.300	-0.1	0.03	2	slightly frozen		H_2O						Std. spiked to MATRIX Extract		Yes, ILIS		95 % | 1			LC-Orbitrap		Glyphosate: Method involving deriv. w. FMOC
115		Yes	Commodity	0.270	-0.5	0.01	10	just thawed	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent), H_2O	None	No		Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Yes, Glyphosate ISTD	2	116 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Extr. solvent 1:1 MeOH:water acidified 1 % Formic
116		No	No	0.351	0.6	0.05	10	slightly frozen	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		Centrifugation, Filtration		Std. add. to extract ALIQUOTS		No		110 % | 2	EUPT-blank	0.4 mg/kg	LC-MS/MS (QQQ)	2 MRM; ESI-	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
122		No	No	0.345	0.5	0.01	10	deep frozen	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		107 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: In eluents FA used instead of HOAc, gradient modified slightly, injection of spinach extract with each sample injected
125		No	No	0.442	1.8	0.01	10	just thawed	Mech. shaking, 5 min	MeOH, H_2O	None	No		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)							Orbitrap	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Without FA
126		No	No	0.291	-0.2	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No	Derivatization with FMOC	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)			116 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.371	0.8	0.05	10	slightly frozen	Mech. shaking, 5 min	Methanol + 2.5 % Citric acid	None	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Glyphosate-^{13}C,^{15}N	1	114 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: The laboratory employes this method like reference method for the extraction

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Glyphosate

Glyphosate (Assigned value = 0.306 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
130		Yes	Scope	0.371	0.8	0.01	10	slightly frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)						Std. spiked to Pure SOLVENT		Yes, Glyphosate-$^{13}C,^{15}N$	1				LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
3rd-131		No	No	0.204	-1.3	0.01	10	just thawed	Man. shaking, 2 min	Water/0,1 M KOH (9/1,V/V)	None		Derivatization with FMOC, derivatization was stopped by acidification with hydrochloric acid until pH 1.5.	Centrifugation, Filtration		Other	other strawberry, lab sample	No		91.5 % | 4	QC validation data	level; 0.010-0.20 mg/kg	LC-MS/MS (QQQ)	LC Agilent 1200 LC/MS Agilent Triple Quad 6410b	Glyphosate: Method involving deriv. w. FMOC; spike-and-recovery approach, a known amount of analyte (glyphosate) is added (spiked) into the blank sample matrix as follows: (Spiking Level mg/kg/Sampel weight g/V(µl)/ STws 1 µg/ml/STws 10 µg/ml): 0.01/10/100/-;0.02/10/200/-;0.05/10/-/50;0.1/10/-/100;0.2/10/-/200)
3rd-132		Yes	Scope	0.098	-2.7	0.01	10	cold	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None		None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		87 % | 3	slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
3rd-133		Yes	No	0.299	-0.1	0.03	1	deep frozen	Mech. shaking, 15 min	0.1 M Tris buffer (pH 7)				None		Std. spiked to MATRIX Extract, multi-levels		Yes, Glyphosate-$^{13}C,^{15}N$	1	102 % | >5	EUPT-blank	0.3 and 0.9 mg/kg	LC-MS/MS (QQQ)	168>63	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: 0.1 M Tris buffer (pH 7) was used as the extraction solvent
3rd-136		Yes	Scope	0.315	0.1	0.02	10	deep frozen	Mech. shaking, 30 min	H_2O	Other		Derivatization with FMOC	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		88.9 % | 3	EUPT-blank	compound used for spiking	LC-MS/MS (QQQ)		Extracted by 20 ml Water and extracts (10 ml) was washed by 10 ml of chloroform. Rreacted with tetraborate and FMOC-Cl, Modification: Extracted by 20 ml Water and extracts (10 ml) was washed by 10 ml of chloroform. Rreacted with tetraborate and FMOC-Cl
3rd-137		No	No	0.179	-1.7	0.05	10	ambient	Mech. shaking, 10 min	MeOH, no	None		None	None, no cleap up. Put it for 12 h in refrigeration		Std. spiked to MATRIX Extract	EUPT-Blank	No		89.5 % | 3	EUPT-blank	no use internal standard, spiken is RL	LC-MS/MS (QQQ)	injection volume: 20 uL	EURL-SRM (SMM-09), Modification: EURL-SRM (SMM-09); Experience is less than 6 months
3rd-139		No	Scope	0.317	0.1	0.03	10	deep frozen	Mech. shaking, 2 min	50mM HOAc/10mM NaHEDTA	None		None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, ILIS	1				LC-MS/MS (QQQ)		Direct determination of glyphosate, glufosinate, and AMPA in soybean and corn by LCMSMS

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Haloxyfop (Assigned value = 0.070 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.056	-0.8	0.05	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS		No					LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.058	-0.7	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables	Yes, other IS	1	81.4 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Scope	0.070	0.0	0.02	10	ambient	Ultra turrax, 1 min	MeOH, H_20, 40 ml MeOH/water (90/10)	None	No	None	Filtration, büchner filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Oxfendazole	2	82.7 % | 1	EUPT-blank		LC-MS/MS (QQQ)		40 ml extraction mixutre, ultraturrax 1 min, büchner filtration, volume ajusted at 60 ml
4		Yes	Commodity	0.0641	-0.3	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		107 % | 1	EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	2 MRM; no hydrolysis step	QuEChERS – Citrate buffered (EN 15662), Modification: no dSPE clean-up; free acid only - no hydrolysis step
6	x	Yes	Scope	0.080	0.6	0.01	10	slightly frozen	Man. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	No		85 % | 2	EUPT-blank	(84.0 - 85.9)%	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
7		Yes	Scope	0.070	0.0	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate Buffer pH 5.5	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, MCPA-D_6	1		slope of std. add. to sample portions		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662)
8		Yes	Commodity	0.082	0.7	0.01	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		92 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
9		Yes	No	0.0688	-0.1	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	Tomato	No		55 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean up
10		No	No	0.066	-0.2	0.01	10	slightly frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Freezing out, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	Yes, Nicarbazin	1	92 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No purification by d-SPE was applied
11		Yes	No	0.041	-1.7	0.01	10	cold	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	1	77 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
12		Yes	No	0.070	0.0	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation				Yes, other IS	1	94 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
13	x	Yes	Scope	0.064	-0.4	0.02	10	deep frozen	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$	No		Centrifugation, 5 min at 5000rpm		Std. spiked to MATRIX Extract, 3 points	EUPT-Blank	No		99.9 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Waters micra	QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: Extr. in Acetonitril, adding salts, centrifugation, put into the vial, dilution 1:1 with mobile phase
14		Yes	No	0.069	-0.1	0.01	10	deep frozen	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Malathion-D_6	1	98 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
15		No	No	0.060	-0.6	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	1	100 % | 2	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
16	x	Yes	Commodity	0.064	-0.4	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Carbofuran-D_3	2	70 % | 2	EUPT-blank	0.02 and 0.10 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
17	x	Yes	No	0.0763	0.3	0.01	10	just thawed	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		97 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Haloxyfop (Assigned value = 0.070 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
18		Yes	Scope	0.064	-0.4	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	other straw-berry	Yes, but only to check Extr. efficiency	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	0.068	-0.1	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Liq.-Liq. Part., Dessication with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1				LC-MS/MS (QQQ)	360/288, 360/252	QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	0.0706	0.0	0.002	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	2	92 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	0.073	0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering		Centrifugation		Std. add. to ex-tract ALIQUOTS		Yes, Bentazone-d6	1	97 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.054	-0.9	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaOAc/MgSO_4$	No		Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	2				LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: no PSA
23		Yes	No	0.040	-1.7	0.022	15	just thawed	Man. shaking, 30 min	EtOAc, ACN	Other	No		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		-% | 2			LC-MS/MS (QQQ)	MFA:Water 5mM am.form. + 0.01 % FA	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
24		Yes	Scope	0.065	-0.3	0.01	10	deep frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		95 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
25		Yes	No	0.072	0.1	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		85 % | 1	EUPT-blank		LC-TOF		QuEChERS – Citrate buffered (EN 15662)
26		No	Commodity	0.072	0.1	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1	98 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
28	x	Yes	Scope	0.061	-0.5	0.01	10	slightly frozen	Mech. shaking, 30 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			None		Std. spiked to MATRIX Extract	EUPT-Blank	No		75 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
29	x	Yes	Commodity	0.0678	-0.1	0.01	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, EtOAc for extraction acidified (1 % HAc)		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		87 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: No addition of buffer and use of acifified EtAc (1 % HAc)
30	x	Yes	Commodity	0.074	0.2	0.01	10	deep frozen	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×		Freezing out		Procedural calibr. (Corr. for Recov.)	Other Bank			100 % |			LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
32		Yes	Scope	0.072	0.1	0.01	10	cold	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, by buffering and acid (FA) addition	None	Filtration		Std. add. to sam-ple PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No		100 % |			LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
33	x	Yes	Scope	0.076	0.3	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank	Multiple cali.	LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
34		Yes	Scope	0.058	-0.7	0.003	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	lettuce	Yes, Isoprotu-ron-D_6	1	75 % | 2	QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Haloxyfop (Assigned value = 0.070 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
35	x	No	No	0.0726	0.1	0.01	10	deep frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No			EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: centrifugation step at -5°C
39		Yes		0.060	-0.6	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		94 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
41		Yes	Scope	0.072	0.1	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	Yes, 1×, 4,5	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	1	121 % | 1	other strawberry	other strawberry	LC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth)
42		Yes	Scope	0.076	0.3	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering	None	Centrifugation, Filtration		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Nicarbazin	1	91 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
44	x	No	Scope	FN	-3.4	0.05	10	slightly frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$	No	Alkaline / Acidic hydrolysis prior to or during extraction, derivatization with trimethyl sulfonium hydroxide (0.2mol/l)	$MgSO_4$/C18		Std. spiked to MATRIX Extract	EUPT-Blank	No		95 % | 2	EUPT-blank	0.1 mg/kg	GC-MSD	SIM mode	Alkaline hydrolysis prior to or during extraction, derivatisation
45		Yes	Commodity	0.0857	0.9	0.01	10	just thawed	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuECHERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
46		Yes	No	0.064	-0.4	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT		Yes, MCPP-D_3	2	107 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
47		Yes	Commodity	0.063	-0.4	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	NaOAc/$MgSO_4$	No		Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME	Yes, TPP	2	102 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		Yes	Scope	0.067	-0.2	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Mecoprop-D_3	1	102 % | 2	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.0749	0.3	0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	No		93.7 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
50		Yes	Scope	0.070	0.0	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT		No		97 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
51		Yes	No	0.0655	-0.3	0.01	10	deep frozen	Mech. shaking, 25 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		89 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
52		Yes	Commodity	0.075	0.3	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Carbendazim-D_3, but not IS corrected, recovery only	1	103 % | 3	EUPT-blank	0.02; 0.1 and 0.5 mg/kg	LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.074	0.2	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Haloxyfop

Haloxyfop (Assigned value = 0.070 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
54		No	No	0.084	0.8	0.01	10	deep frozen	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 10ul 5 %FA in acetonitrile into 1 ml extract added		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no cleanup
57		No	No	0.071	0.0	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		121.3 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	Scope	0.078	0.4	0.01	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		92.8 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
61		No	No	0.070	0.0	0.01	10	deep frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank	rec. to check meth. performance	LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662)
62	x	Yes	No	FN	-3.4	0.05	10	ambient	Man. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	2	160 % | 1	QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no PSA Clean-up
63		Yes	Scope	0.067	-0.2	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	0.067	-0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×, ACN w. 1 % FA		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	2	98 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
66	x	Yes	No	0.0649	-0.3	0.01	5	slightly frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		90 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
67	x	Yes	Scope	0.0743	0.2	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. add. to extract ALIQUOTS		Yes, TPP	2	99 % | 1	EUPT-blank	0.3 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
68		Yes	Commodity	0.072	0.1	0.01	10	deep frozen	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (other); Dispersive-SPE (PSA/C18)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	1				LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
69		Yes	No	0.073	0.2	0.01	10	deep frozen	Ultra turrax, 30 min	MeOH, H_2O, 10 H_2O/20 MeOH	None	Yes, 2×	Alkaline hydrolysis prior to or during extraction	SEP-Column (Extrelut)		Std. spiked to MATRIX Extract	EUPT-Blank	No		91 % | 4	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: alkaline hydrolysis
70		Yes		0.066	-0.2	0.01	10	just thawed	Man. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		148 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.748	38.6	0.01	5	ambient	Ultra turrax, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
72		No	No	0.073	0.2	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Isoprotu-ron-D_6	1	100 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
74		Yes	Commodity	0.0772	0.4	0.01	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Pirimicarb-D_6	1	77 % | 1	EUPT-blank		LC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Haloxyfop

Haloxyfop (Assigned value = 0.070 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added? 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
75	x	Yes	Scope	0.121	2.9	0.01	10	deep frozen	Man. shaking, 15 min	ACN	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		87 % | 4	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: slightly acidified
76		Yes	Scope	0.070	0.0	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank				QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
78		Yes	Commodity	0.070	0.0	0.005	5	deep frozen	Ultra turrax, 2 min	MeOH, CH_2Cl_2	NaCl	No	None	Liq.-Liq. Part., ChemElut pH 4.5		Std. spiked to MATRIX Extract	EUPT-Blank	No		107.8 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: buffered ChemElut, pH 4.5
79		Yes	Scope	0.060	-0.6	0.01	10	deep frozen	Ultra turrax, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank			86 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
81	x	No	Commodity	0.0665	-0.2	0.01	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, 1 % FA in MeOH		Centrifugation, Filtration		Std. spiked to MATRIX Extract		No		101.5 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Different L-Chromatography conditions - in house LC methods
83	x	Yes	Scope	0.810	42.2	0.01	10	deep frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$	Yes, 1×, 100 uL phosphoric acid	None	None, none		Other		No		82 % | 3	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	Extr. with CH3CN followed by $MgSO_4$, NaCl	extraction with CH3CN followed by $MgSO_4$, NaCl; none
84		Yes	Commodity	0.070	0.0	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.066	-0.2	0.003	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	None	None		Std. spiked to MATRIX Extract		Yes, Terbutryn-D_5	1	90 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.056	-0.8	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Propiconazole-D_5	1	67 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		No	No	0.080	0.6	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	Other Bank	No		113 % | 1	other organic strawberry	other org. strawberry, 0.010 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17); longer experience (more than 2 years) with another method
91	x	Yes	No	0.054	-0.9	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		113.1 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
92		Yes	Commodity	0.0803	0.6	0.01	10	deep frozen	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No					LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
93		Yes	Commodity	0.0545	-0.9	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, 2,4,6-(Trimethyl-phenoxy)-HOAc	1	90 % | 1	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
94		Yes	Scope	0.072	0.1	0.01	10	deep frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 200 µl of 5 N NaOH		Centrifugation, Filtration		Std. spiked to MATRIX Extract	Other Bank	No	1	81 % | 2	EUPT-blank		LC-MS/MS (QQQ)	1 µl inj.	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol
deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)
‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard
2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Haloxyfop

Haloxyfop (Assigned value = 0.070 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
95		Yes	Scope	0.076	0.3	0.005	10	slightly frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×, Extr. with Acetonitril + 1 % FA	None	Centrifugation		Std. add. to extract ALIQUOTS	EUPT-Blank	No		98 % | 5	QC validation data	Matrix: lemon	LC-MS/MS (QQQ)	pos	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
96	x	Yes	Scope	0.064	-0.4	0.01	10	just thawed	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, Nicarbazin	1				LC-MS/MS (QQQ)	ESI-neg/pos	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
97		Yes	Scope	0.087	1.0	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×, citrate buffer	None	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/ freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1	93 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
98	x	Yes	Commodity	0.0515	-1.1	0.01	10	cold	Man. shaking, 1 min	ACN		No				Std. spiked to MATRIX Extract	EUPT-Blank	No		93 % | 1	EUPT-blank		LC-MS/MS (QQQ)	LC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	0.077	0.4	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1	90 % | 1	EUPT-blank	0.05 mg/kg to EUPT Blank	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	0.032	-2.2	0.01	10	cold	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
103	x	Yes	Scope	0.0727	0.1	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None			Std. spiked to MATRIX Extract	EUPT-Blank	No		81 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	Mini-Luke-Type (Acetone DCM-PE)
104		No	No	0.0753	0.3	0.01	10	cold	Mech. shaking, 25 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		99 % | 3	EUPT-blank		LC-MS/MS (QQQ)	ESI	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
106		No	No	0.120	2.8	0.01	10	ambient	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TPP	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
107	x	Yes	No	0.0856	0.9	0.01	10	cold	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, 1 time with H_2SO_4, second time with NaOH	Acidic hydrolysis prior to or during extraction	Freezing out		Std. spiked to MATRIX Extract		Yes, Nicarbazin	1	99 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
108		Yes	Scope	0.047	-1.3	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, 4-chloro-3,5-dimethylphe-noxy-HOAc	1	78 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
109		Yes	Scope	0.070	0.0	0.01	10	ambient	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % FA	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	1	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.10 mg/ kg	LC-MS/MS (QQQ)	QQQ 6495 ifun-nel Agilent	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
113		Yes	Scope	0.076	0.3	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			None		Std. add. to extract ALIQUOTS	EUPT-Blank	Yes, Desmetryn	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Scope	0.071	0.0	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Yes, TPP	1	101 % | 3	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		Yes	No	0.0752	0.3	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Filtration		Std. add. to extract ALIQUOTS		Yes, Tris(1,3-dichloroisopropyl) phosphate	1	90 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)	2 MRM; ESI-	QuEChERS – Citrate buffered (EN 15662), Modification: only first step; no purification with PSA

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

COMPULSORY ANALYTES | Haloxyfop

Haloxyfop (Assigned value = 0.070 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
117		Yes	Commodity	0.0949	1.4	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		None		Std. add. to extract ALIQUOTS		Yes, Nicarbazin	1				LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
118		Yes	Scope	0.134	3.6	0.05	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Yes, Atrazine-D_5	1				LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
124	x	Yes	Scope	0.0728	0.1	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Pet. Ether	None	No	None	Dessication with Na_2SO_4, Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		106.1 % | 2	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
125		No	No	0.082	0.7	0.01	10	just thawed	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate-Buffer mix		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)						LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean-up step
126		No	No	0.047	-1.3	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)			88.1 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	Scope	0.068	-0.1	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	orange	No		112 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: The laboratory employes this method like reference method for the extraction
129		Yes	Scope	0.067	-0.2	0.01	15	deep frozen	Mech. shaking, 15 min	15 ml 1 % Hac in MeCN	$NaOAc/MgSO_4$	No	None	Dispersive-SPE ($PSA/MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		86 % | 4	EUPT-blank		LC-Q-TOF		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
130		Yes	Scope	0.087	1.0	0.01	10	slightly frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			Centrifugation		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, Diuron-D_6	1	127 % | 3	EUPT-blank		LC-MS/MS (QQQ)	neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
3rd-132		Yes	Scope	0.032	-2.2	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix		None	Dispersive-SPE ($PSA/GCB/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, TDCPP	2	85 % | 2			LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-133		Yes	Commodity	0.0733	0.2	0.01	5	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$			Dispersive-SPE ($ODS/MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, 2,4-D-D_6	1	91.7 % | 2	EUPT-blank	Recovery based on matrix blank 0.01 mg/kg.	LC-Orbitrap	m/z 360.02559 [M-H]-	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: Quantitative analysis - standard solution five point calibration (after matrix-matched screening analysis)
3rd-136		Yes	Scope	0.0658	-0.3	0.01	10	deep frozen	Man. shaking, 3 min	ACN + 1 % FA (A-QuECHERS)	None		None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		86.2 % | 3	EUPT-blank	compound used for spiking	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: Extracted by 10 ml of acetonitilre and of 4 g $MgSO_4$ and 1 g NaCl for partitioning. No cleanup was conducted
3rd-139		No	Commodity	0.016	-3.1	0.01	10	deep frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$		None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1				LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Bifenazate (sum) (Assigned value = 0.270 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.172	-1.5	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	Reduction with ascorbic acid (EURL-SRM Mth)	None		Std. add. to extract ALIQUOTS		Bifenazate	No					LC-MS/MS (QQQ)		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34), Modification: Extr. with EtOAc
2		Yes	Scope	0.198	-1.1	0.02	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	None		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, Isoproturon-D_6	1	78.5 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Scope	0.201	-1.0	0.01	10	ambient	Ultra turrax, 1 min	MeOH, H_2O, 40 ml MeOH/ water (90/10)	None	No	None	Filtration, büchner filtration		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Oxfendazole	2	86.7 % | 1	EUPT-blank		LC-MS/MS (QQQ)		40 ml extraction mixutre, ultraturrax 1 min, büchner filtration, volume ajusted at 60 ml
6	x	Yes	No	0.184	-1.3	0.01	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		No		102.8 % | 2	EUPT-blank	(101.2 - 104.4)%	LC-MS/MS (QQQ)		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34)
7		Yes	Scope	0.385	1.7	0.02	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate Buffer pH 5.5	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Bifenazate	Yes, Linuron-D_6	1		slope of std. add. to sample portions		LC-MS/MS (QQQ)	ESI-pos	QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34)
12		Yes	No	0.220	-0.7	0.01	10	ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to Pure SOLVENT			Yes, other IS	1	110 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
17	x	No	Scope	0.308	0.6	0.02	10	slightly frozen	Mech. shaking, 2 min	ACN, EtOAc	None	No	Reduction with ascorbic acid (EURL-SRM Mth)	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, Phenanthrene-D_{10}	2	102 % | 1	EUPT-blank		GC-MSD		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34), Modification: RP-SPE cleanup step
18		Yes	Scope	0.249	-0.3		10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, but only to check Extr. efficiency	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
21		Yes	Scope	0.241	-0.4	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 3×, 1) Buffering 2) FA 3)Ascorbic acid		Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS			Yes, TPP	1	96 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34)
25		Yes	No	0.320	0.7	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No		99 % | 1	EUPT-blank		LC-TOF		QuEChERS – Citrate buffered (EN 15662); the result corresponds to the parent compound only
26		No	Commodity	0.300	0.4	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Bifenazate	Yes, TPP	1	100 % | 2	slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
27		No		0.239	-0.5	0.005	10	deep frozen	Ultra turrax, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
29	x	No	No	0.218	-0.8		10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		79 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789); Only Bifenazate is included in routine scope (and accredited). Bifenazate-diazene was screened for (LC-MS/MS ESI+) but levels were far below MRRL for the sum. Both components are analysed for in the PT.
33	x	Yes	Scope	0.204	-1.0	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Bifenazate and Bifenazate diazene (separately)	No		100 % | 1	EUPT-blank	Multiple cali.	LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662), Modification: injection of Extract 1 - no dSPE
34		Yes	Scope	0.326	0.8	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	lettuce		Yes, Antracene-D_{10}	1	85 % | 2	QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Bifenazate (sum) (Assigned value = 0.270 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
35	x	No	No	0.316	0.7	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Bifenazate	Yes, Chlorpyrifos Ethyl-D_{10}	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: centrifugation step at -5°C
39		Yes		0.280	0.1	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	No		95 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
41		Yes	Scope	0.280	0.1	0.02	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	None	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Bifenazate	Yes, TPP	1	47 % | 1	other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		No	No	0.275	0.1	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering	Reduction with ascorbic acid (EURL-SRM Mth)	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, Chlorpyrifos-D_{10}	1	101 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34); No experience with sum
45		Yes	No	0.377	1.6	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Bifenazate	No			EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	ESI-pos	QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34)
47		Yes	No	0.285	0.2	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	$NaOAc/MgSO_4$	No		Centrifugation		Procedural calibr. (Corr. for Recov.), Other	vegetables/ fruit ME	Bifenazate	Yes, TPP	2	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		No	Scope	0.295	0.4	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, Pirimicarb-D_6	1	92 % | 2	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
50		Yes	Scope	0.285	0.2	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT		None of those listed	No		110 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: No clean up; Only parent compound, without bifenazate-diazene
52		Yes	Commodity	0.257	-0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, Pirimicarb-D_6, but not IS corrected, recovery only	1	100 % | 3	EUPT-blank	0.02; 0.1 and 0.5 mg/kg	LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662); did QuEChERS and modified (EURL-SRM) sample prep, better recovery for QuEChERS, those results submitted
53		Yes	Scope	0.234	-0.5	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Bifenazate and Bifenazate diazene (separately)	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		No	No	0.423	2.3	0.01	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	None		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	No		88.7 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34); Bifenazate (parent): experience = Very long (>2 years)
63		Yes	Scope	0.304	0.5	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)								LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
70		Yes		0.630	5.3	0.01	10	just thawed	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (other); PSA/C18/ $MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Bifenazate	No		91 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.245	-0.4	0.01	15	ambient	Mech. shaking, 5 min	ACN	$NaOAc/MgSO_4$	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, TPP	2		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
72		Yes	No	0.187	-1.2	0.01	10	deep frozen	Mech. shaking, 1 min	ACN, 1 % Acetic Acid	$NaOAc/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	organic grape		Yes, Isoproturon-D_6	1	155 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
74		Yes	No	0.340	1.0	0.01	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate and Bifenazate diazene (separately)	Yes, Parathion-d10	1	116 % | 1	EUPT-blank		GC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Bifenazate (sum) (Assigned value = 0.270 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
76		Yes	Commodity	0.293	0.3	0.02	10	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$), Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Bifenazate	No			QC validation data		LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
78		Yes	Commodity	0.245	-0.4	0.005	10	deep frozen	Ultra turrax, 2 min	MeOH, CH_2Cl_2	NaCl	No	None	Liq.-Liq. Part., ChemElut unbuffered		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Carbendazim-D_4	2	116.5 % | 1	EUPT-blank	0.25 mg/kg	LC-MS/MS (QQQ)	ESI-pos	Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth)
84		Yes	Commodity	0.290	0.3	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth), according to EURL SRM protocol	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Bifenazate and Bifenazate diazene (separately)	Yes, TPP	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34)
86		Yes	Scope	0.239	-0.5	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	None	None		Std. spiked to MATRIX Extract		Bifenazate and Bifenazate diazene (separately)	Yes, Terbutryn-D_5	1	87 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
89		No	No	0.397	1.9	0.01	10	deep frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	No		96.2 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
92		Yes	Commodity	0.293	0.3	0.02	10	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$), Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Bifenazate	No					LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
95		Yes	Scope	0.237	-0.5	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, end-extract with ascorbic acid	Reduction with ascorbic acid (EURL-SRM Mth)	Dispersive-SPE ($PSA/MgSO_4$), Centrifugation		Std. add. to extract ALIQUOTS		Bifenazate	No		86 % | 5	QC validation data		LC-MS/MS (QQQ)	pos ionisation	QuEChERS – Citrate buffered (EN 15662), Modification: http://www.eurl-pesticides.eu/userfiles/file/EurlSRM/meth_Bifenazate_EurlSRM.pdf
97		Yes	Scope	0.350	1.2	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	None	Yes, 1×, citrate buffer	Reduction with ascorbic acid (EURL-SRM Mth)	Freezing out, Dispersive-SPE ($PSA/MgSO_4$), Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, Isoproturon-D_6	1	78 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Addition of ascorbic acid (30 % w/w) to sample extract; only bifenazate analysed, bifenazate-diazene not available
99		Yes	Scope	0.201	-1.0	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	None		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, TPP	1	96 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34)
102		Yes	Scope	0.230	-0.6	0.01	10	cold	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662); bifenazate only, without diazine
103	x	Yes	Scope	0.278	0.1	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None	None		Std. spiked to MATRIX Extract	None (pure Water/Solvent)		No		106 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	No	0.302	0.5	0.02	10	cold	Mech. shaking, 25 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×	Reduction with ascorbic acid (EURL-SRM Mth)	Centrifugation, Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	No		93 % | 3	EUPT-blank		LC-MS/MS (QQQ)	ESI	QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34)
106		No	Scope	0.250	-0.3	0.01	10	ambient	Man. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	None of those listed	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
107	x	No	No	0.239	-0.5	0.02	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Ascorbic acid	None	Freezing out		Std. spiked to Pure SOLVENT			Yes, TPP	1	82 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
109		Yes	Scope	0.310	0.6	0.01	10	ambient	Mech. shaking, 1 min	EtOAc	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Bifenazate	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	QQQ 7000C Agilent	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Bifenazate (sum) (Assigned value = 0.270 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
113		Yes	Scope	0.310	0.6	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank		Yes, Desmetryn	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Scope	0.250	-0.3	0.05	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple	None of those listed	Yes, PCB-153	1	119 % | 3	EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
118		No	Scope	0.210	-0.9	0.01	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Bifenazate	No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
125		No	No	0.322	0.8	0.01	10	just thawed	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate-Buffer mix		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Bifenazate						LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean-up step
126		No	No	0.159	-1.6	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Bifenazate diazene			78.1 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.333	0.9	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	orange	None of those listed	No		102 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuEChERS – Citrate buffered (EN 15662), Modification: The laboratory employes this method like reference method for the extraction; The laboratory only reports bifenazate parent. Not included bifenazate-diazene
129		Yes	No	0.256	-0.2	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Reduction with ascorbic acid (EURL-SRM Mth)	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	No		87 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEhERS-based Method involving reduction w. Ascorb. Acid by EURL-SRM (SRM-34), Modification: SRM 34 , Version1 / 17.03 .2017, with no clean up step.
130		No	Scope	0.258	-0.2	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE ($PSA/GCB/MgSO_4$)		Std. spiked to Pure SOLVENT		Bifenazate	Yes, TPP	1				LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
3rd-134		Yes	No	0.500	3.4	0.5	10	ambient	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaOAc/MgSO_4$		None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Bifenazate	Yes, other IS	1				LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
3rd-138		Yes	Scope	0.219	-0.8	0.01	10	just thawed	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank				90 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Bromide ion (Assigned value = 19.1 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	22.0	0.6	3	5	deep frozen	Mech. shaking, 20 min	H_2O	None	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)		No					IC-Conductivity		ion chromatography
2		Yes	Scope	17.3	-0.4	3	3	deep frozen	Mech. shaking, 60 min	EtOAc	None	No	Derivatization with propylene oxide	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		97 % | 5	EUPT-blank		GC-MSD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
7		No	Scope	13.2	-1.2	3	10	cold		EtOAc	None	No	Derivatization with propylene oxide	None		Std. spiked to Pure SOLVENT		No					GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
8		Yes	No	21.2	0.4	2	10	just thawed	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		89 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
12		No	Scope	21.0	0.4	5	2	ambient	Mech. shaking, 10 min	H_2O		Yes, 1×		Centrifugation		Std. spiked to Pure SOLVENT		No					IC-Conductivity		ion chromatography
13	x	Yes	Scope	28.5	2.0	1	5	deep frozen	Man. shaking, 60 min	H_2O, EtOAc, 3 ml water, after deriv. 50 ml EtOAc	None	No	Derivatization with propylene oxide, 5 ml of propylenoxid solution with 1 ml 3M H_2SO_4	Dessication with Na_2SO_4		Procedural calibr. (Corr. for Recov.), 3 points	EUPT-Blank	Yes, 3-bromo-1-propanol	2		EUPT-blank		GC-(μ) ECD	Varian 3800	Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
15		Yes	No	18.0	-0.2	3	10	cold	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, TPP	1	100 % | 2	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
16	x	Yes	Scope	20.2	0.2	2.5	5	slightly frozen	Mech. shaking, 20 min	EtOAc	None	No	Derivatization with propylene oxide	Dessication with Na_2SO_4		Std. spiked to Pure SOLVENT	EUPT-Blank	Yes, 3-bromo-1-propanol	2	90 % | 2	EUPT-blank	5 and 10 mg/kg	GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
18		Yes	Scope	17.1	-0.4	1	10	deep frozen	Man. shaking w. intervals, 60 min	Propylenoxide plus H_2SO_4, EtOAc	None	No	Derivatization with propylene oxide	Dessication with Na_2SO_4		Other		No		86 % | 2	EUPT-blank		GC-(μ) ECD	DB-WAX	Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
19	x	Yes	Scope	20.2	0.2	3	10	slightly frozen	Mech. shaking, 30 min	EtOAc		No	Derivatization with propylene oxide			Std. spiked to Pure SOLVENT		No					GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
22		Yes	Scope	18.9	0.0	6	5	slightly frozen	Man. shaking, 30 min	H_2O, H_2O		Yes, 1×		Liq.-Liq.-Part.		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, other IS	1				GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
24		Yes	Scope	18.2	-0.2	2.5	5	deep frozen	Man. shaking, 90 min	EtOAc	None	No	Derivatization with propylene oxide	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		90.2 % | 3	EUPT-blank		GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
26		No	No	18.0	-0.2	5	10	deep frozen	Man. shaking, 5 min	H_2O	None	No		Filtration		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No		100 % | 2	slope of std. add. to sample portions		IC-Conductivity		in house method
33	x	Yes	Scope	17.3	-0.4	5	3	cold	Man. shaking, 1 min	EtOAc	None	Yes, 1×, H_2SO_4	Derivatization with propylene oxide	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, 3-bromo-1-propanol	1	100 % | 1	EUPT-blank	Multiple cali.	GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type); assessment of FN using MRRL of 0.01 mg/kg doesn´t make sense - especially not for routine analysis
34		Yes	No	10.1	-1.9	3	10	ambient	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)		No	None	None		Std. spiked to Pure SOLVENT		No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Bromide ion (Assigned value = 19.1 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
35	x	No	No	18.0	-0.2	3	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No			EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
39		No		18.0	-0.2	10	10	slightly frozen	Man. shaking, 5 min	H_2O	None	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		78 % | 1	EUPT-blank		IC-Conductivity		Internal method (extraction with hot water)
41		Yes	Scope	16.9	-0.5	0.01	10	ambient		EtOAc			Derivatization with propylene oxide				None (pure Water/Solvent)	No		98 % | >5			GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
42		Yes	Scope	0.16	-4.0	0.1	10	deep frozen			None	No	Derivatization with propylene oxide	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		103 % | 1	EUPT-blank		GC-MSD	NCI	Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
45		Yes	Commodity	29.6	2.2	2	5	deep frozen		H_2O		Yes, 1×, 3M sulphuric acid	Derivatization with propylene oxide	Liq.-Liq. Part., EtOAc		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, 3-bromo-1-propanol	2		EUPT-blank	25 mg/kg	GC-(μ) ECD	GC-ECD	Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
47		Yes	Commodity	19.5	0.1	5	3	deep frozen	Mech. shaking, 5 min	MeOH, H_2O	None	No		Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		90 % | 1	EUPT-blank		LC-UV or DAD		Methanol extraction + UV/DAD-detection
48		Yes	Scope	20.79	0.4	0.2	10	slightly frozen	Man. shaking w. intervals, 1 min	EtOAc	Other	No	Derivatization with propylene oxide	Dessication with Na_2SO_4		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		107 % | 1	EUPT-blank		GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
49	x	Yes	Commodity	19.0	0.0	3	5	cold	Man. shaking w. intervals, 20 min	EtOAc	None	No	Derivatization with propylene oxide	Centrifugation, Dessication with Na_2SO_4, filtration with syringe filters		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, 3-bromo-1-propanol	2	88 % | 2	EUPT-blank		GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
50		Yes	Scope	20.3	0.2	2.5	4	deep frozen	Mech. shaking, 1 min	H_2O				Filtration		Std. spiked to Pure SOLVENT		No		87.2 % | 2	EUPT-blank		IC-Conductivity		in house method, extraction by mechanical shaking and water bath (100°C), Ion Chromatogr.
52		Yes	No	21.5	0.5	3	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)		No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$; Phophonic acid-$^{18}O_3$	1				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
53		Yes	Scope	21.483	0.5	0.01	2	deep frozen	Mech. shaking, 1 min	EtOAc		Yes, 1×, acidec with 400 µL 25 % H_2SO_4	Derivatization with propylene oxide	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Iodid	1	100 % | 1	EUPT-blank		GC-MSD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
58		Yes	Scope	27.4	1.7	5	2	ambient	Ultrasonic bath, 15 min	H_2O		No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		112 % | 1	EUPT-blank		IC-Conductivity		IC after ultrasonic extraction
63		Yes	Commodity	31.0	2.5	0.01	10	ambient	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		None		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
66	x	Yes	No	19.7	0.1	3	10	slightly frozen								Std. spiked to Pure SOLVENT	EUPT-Blank	No					XRF		Measurement of bromide using XRF
69		Yes	No	19.4	0.1	5	5	cold	Man. shaking, 1 min	EtOAc	None	No	Derivatization with propylene oxide	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, 3-bromo-1-propanol	2	106 % | 2	EUPT-blank		GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

OPTIONAL ANALYTES | Bromide ion

Bromide ion (Assigned value = 19.1 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
71		Yes	No	29.3	2.1	10	2	ambient	Mech. shaking, 30 min	H_2O	None	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No			EUPT-blank		IC-Conductivity		Ionic Chromatography
74		Yes	Commodity	19.9	0.2	5	15	cold	Ultrasonic bath, 10 min	H_2O	None	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		105 % | 1	EUPT-blank		ICP-MS		Determination of bromide ion in cereals, fruit, vegetables and blood using silver electrode in a high performance liquid chromatographic-electrochemic
76		Yes	Scope	16.35	-0.6	0.01	5	cold		H_2O	None	No				Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No			QC validation data		IC-Conductivity		House method modifying §64 LFGB 26.00-1. Bestimmung des Nitratgehaltes in Gemüseerzeugnissen HPLC/IC-Verfahren
78		Yes	Commodity	18.1	-0.2	0.2	10	deep frozen	Man. shaking, 1 min	Hexane		No	Derivatization with propylene oxide	None		Std. spiked to Pure SOLVENT: hexane	None (pure Water/Solvent)	No		115 % | 1	EUPT-blank	luvel 2 mg/kg	GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type), Modification: extraction solvent
79		Yes	Scope	10.6	-1.8	4	6	deep frozen	Man. shaking, >180 min	H_2O	None	No				Std. spiked to Pure SOLVENT	None (pure Water/Solvent)			88 % | 2	EUPT-blank		LC-UV or DAD		HPLC UV
81	x	No	No	19.7	0.1	3	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, 1 % FA in MeOH		Centrifugation, Filtration		Std. spiked to MATRIX Extract		No		99.5 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Different L-Chromatography conditions - in house LC methods
84		Yes	Commodity	20.0	0.2	3	5	deep frozen	Mech. shaking, 15 min	H_2O	None	No	Derivatization with propylene oxide, according to protocol (§ 64 method)	Liq.-Liq. Part., according to protocol (§ 64 method)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	3	95 % | 3	EUPT-blank		GC-MSD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
91	x	Yes	Commodity	14.8	-0.9	3	5	ambient	Man. shaking, 1 min	EtOAc	None	Yes, 1×, H_2SO_4	Derivatization with propylene oxide	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No		92 % | 1			GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
94		Yes	Scope	11.9	-1.5	0.5	10	deep frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		Freezing out, Centrifugation		Std. spiked to MATRIX Extract	Other Bank	No		63 % | 2	other blank strawberry	other blank strawberry	LC-MS/MS (QQQ)	1 µl inj., dil. 1:20 MeOH/1 % FA + 1:10 blank ext.	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
95		Yes	Scope	21.2	0.4	0.1	10	slightly frozen		EtOAc, exraction after derivatization	Other	No	Derivatization with propylene oxide, $(NH_4)2SO_4$ as partition salt during extraction with EtOAc	Centrifugation, Dessication with Na_2SO_4, after extraction		Procedural calibr. (Corr. for Recov.)				85 % | 5	QC validation data		GC-(μ) ECD		Br^- deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
97		Yes	Commodity	24.4	1.1	1	2	cold	Mech. shaking, 20 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None		None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		91 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
98	x	Yes	Commodity	17.8	-0.3	3	5	cold		EtOAc				None		Std. spiked to MATRIX Extract	EUPT-Blank	No		87 % | 1	EUPT-blank		GC-MSD	GC-MS	Br^- deriv. with ethyleneoxide (EN 13191-2 / §64 LFGB L00.36.2/DFG-S18 type)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Bromide ion (Assigned value = 19.1 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
99		Yes	Scope	16.8	-0.5	0.2	10	deep frozen	Man. shaking w. intervals, 1 min	Extr./Part. Solvent 1: propylenoxid/ H_2SO_4 solution, EtOAc			Derivatization with propylene oxide, after addition shaking (<1 min), derivatization 1h RT	Liq.-Liq. Part., liquid-liquid partitioning with ethyl acetat		Procedural calibr. (Corr. for Recov.), water+ resp. amount of Br solution	None (pure Water/Solvent)	No		99 % | 1	other blank	certified reference material (whey powder)	GC-MSD		Br deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
102		No	Scope	18.1	-0.2	2	10	cold	Man. shaking w. intervals, 60 min	H_2O, EtOAc	None	No	Derivatization with propylene oxide	Centrifugation, Dispersive-SPE (ODS)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Iodethanol	3				GC-MSD		Br deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
103	x	Yes	Scope	18.4	-0.1	0.5	1	just thawed	Mech. shaking, 180 min	H_2O, 5 ml Water+1 ml TMAH (25 %)	None	No, TMAH (25 %) solution	None	None		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, Tellurium (Te)	1	100 % | 1	EUPT-blank	50 mg/kg	ICP-MS		Extraction/ICP-MS
113		Yes	Scope	23.0	0.8	0.05	10	slightly frozen		H_2O, EtOAc						Std. spiked to MATRIX Extract				87 % | 1	EUPT-blank		GC-(µ) ECD		Br deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
115		Yes	Commodity	20.0	0.2	5	5	just thawed	Man. shaking, 2 min	EtOAc	None	No	Derivatization with propylene oxide	Dessication with Na_2SO_4		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	No		100 % | 3	EUPT-blank		GC-Ion Trap		Br deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
116		No	No	18.3	-0.2	3	10	slightly frozen	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		Centrifugation, Filtration		Std. add. to extract ALIQUOTS		No		112 % | 2	EUPT-blank	20 mg/kg	LC-MS/MS (QQQ)	2 MRM; ESI-	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
117		Yes	Commodity	19.1	0.0	2	10	ambient		EtOAc	None	No	Derivatization with propylene oxide	None		Procedural calibr. (Corr. for Recov.), KBr dissolved in water		No					GC-(µ) ECD		Br deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
118		Yes	Scope	21.1	0.4	1	5	just thawed	Man. shaking, 1 min	EtOAc		No	Derivatization with propylene oxide			Std. spiked to Pure SOLVENT		No					GC-(µ) ECD		Br deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)
125		No	No	18.0	-0.2	0.05	10	just thawed	Mech. shaking, 5 min	MeOH, H_2O	None	No		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)							Orbitrap	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Without FA
129		Yes	No	5.66	-2.8	1	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		92 % | 5	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
3rd-132		Yes	Commodity	9.50	-2.0	0.01	10	cold	Mech. shaking, 30 min	H_2O	None		None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		105 % | 2	slope of std. add. to sample portions		IC-Conductivity		SRPS EN 12014-2, Modification: SRPS EN 12014-2
3rd-133		Yes	No	21.2	0.4	3	1	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)				None		Std. spiked to MATRIX Extract, multi-levels	EUPT-Blank	Yes, Glufosinate-D_3 hydrochloride	1	102 % | >5	EUPT-blank	20 and 60 mg/kg	LC-MS/MS (QQQ)	79>79 and 81>81	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Glufosinate-d3 hydrochloride was used as internal standard
3rd-138		Yes	Scope	20.3	0.2	0.2	10	just thawed		EtOAc						Std. spiked to Pure SOLVENT	EUPT-Blank			92 % | 1	EUPT-blank		GC-(µ) ECD		Br deriv. with propyleneoxide (EN 13191-2 / §64 LFGB L00.36-2/EURL-SRM Mth type)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Carbofuran (part of sum) (*Assigned value = 0.0030 mg/kg*)*

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.0027		0.001	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS		Carbofuran and Carbosulfan (separately)	No					LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	FN		0.001	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, other IS	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Scope	0.0020		0.01	10	ambient	Ultra turrax, 1 min	MeOH, H_2O, 40 ml MeOH/water (90/10)	None	No	None	Filtration, büchner filtration		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Oxfendazole	2	91.3 % | 1	EUPT-blank		LC-MS/MS (QQQ)		40 ml extraction mixutre, ultraturrax 1 min, büchner filtration, volume ajusted at 60 ml
4		Yes	Commodity	0.00163		0.001	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, sodium hydrogen carbonate	None	None		Std. spiked to MATRIX Extract	other organic strawberry	Carbofuran and Carbosulfan (separately)	No		88 % | 1	other blank	carbofuran and carbosulfan separately @ 0.02 mg/kg	LC-MS/MS (QQQ)	2 MRM each	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: solvent exchange into MeOH
6	x	Yes	No	FN		0.01	10	slightly frozen	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		No					LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
8		Yes	Commodity	0.0027		0.001	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		92 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
9		Yes	No	0.0034		0.001	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank		No		125 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean up
10		No	No	0.0067		0.001	10	slightly frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	Filtration		Std. add. to extract ALIQUOTS, Rec. Factor	EUPT-Blank	Carbofuran	No		114 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
12		Yes	No	FN		0.01																				
13	x	Yes	Scope	0.0019		0.001	10	deep frozen	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$	No		Centrifugation, 5 min at 5000rpm		Std. spiked to MATRIX Extract, 3 points	EUPT-Blank	Carbofuran	No		90.4 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Agilent 6460	QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: Extr. in Acetonitril, adding salts, centrifugation, put into the vial, dilution 1:1 with mobile phase
17	x	Yes	Commodity	0.0057		0.001	10	just thawed	Man. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×	Acidic hydr. in extract (EURL-SRM mth)	None		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
18		Yes	Scope	0.0018		0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran and Carbosulfan (separately)	Yes, but only to check Extr. efficiency	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	0.0024		0.001	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	No	Acidic hydr. in extract (EURL-SRM mth)	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	2	93 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	0.0031		0.001	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 2×, 1) Buffering 2) FA		Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to extract ALIQUOTS			Yes, TPP	1	93 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.0053		0.001	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaOAc/MgSO_4$	No		Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank		Yes, Nicarbazin	2				LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: no PSA
25		Yes	No	0.0061		0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, other IS	1	111 % | 1	EUPT-blank		LC-TOF		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value based on the entire population was statistically uncertain, no z-scores were calculated.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

OPTIONAL ANALYTES | Carbofuran (part of sum)

Carbofuran (part of sum) (*Assigned value = 0.0030 mg/kg*)*

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
26		No	Commodity	0.002		0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Carbofuran	Yes, TPP	1	100 % | 2	slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
27		Yes	Scope	FN		0.01	10	deep frozen	Ultra turrax, min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
29	x	Yes	Commodity	0.0034		0.001	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method		Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		97 % | 1	EUPT-blank	Carbofuran: 97 %, Carbosulfan: 81 %	LC-MS/MS (QQQ)	ESI-pos	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
30	x	Yes	Scope	0.0016		0.001	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix		Acidic hydr. in extract (EURL-SRM mth)	, Dispersive-SPE ($PSA/MgSO_4$)		Procedural calibr. (Corr. for Recov.)	Other Bank				100 % |			LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
33	x	Yes	Scope	0.0039		0.001	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, H_2SO_4	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank		No		100 % | 1	EUPT-blank	Multiple cali.	LC-MS/MS (QQQ)	ESI-pos	Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
34		Yes	Scope	0.0021		0.001	10	ambient	Mech. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	lettuce		Yes, Isoproturon-D_6	1	75 % | 2	QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	0.0047		0.001	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Carbofuran	Yes, Carbofuran-D_3	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: centrifugation step at -5°C
38		Yes	No	0.0018		0.001	10	slightly frozen	Man. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Triphenylphosphine	1	122 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
39		Yes		FN		0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$)		Std. spiked to MATRIX Extract			No					LC-Q-TOF		QuEChERS – Citrate buffered (EN 15662)
40		No	No	0.0090		0.001	10	slightly frozen	Mech. shaking, 2 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)			Std. spiked to MATRIX Extract	EUPT-Blank		No		118 % | 2	EUPT-blank		LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
41		Yes	Scope	0.0025		0.001	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	None	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Carbofuran	Yes, TPP	1	91 % | 1	other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	0.00435		0.002	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering	Acidic hydr. in extract (EURL-SRM mth)	Dispersive-SPE ($PSA/MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Carbofuran	Yes, Chlorpyrifos-D_{10}	1	72 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
45		Yes	Commodity	0.0023		0.001	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE ($PSA/MgSO_4$), Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)		No		146 % | 2	EUPT-blank	0.02 mg/kg	LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
48		Yes	Scope	0.0039		0.001	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	Centrifugation, Filtration		Std. add. to extract ALIQUOTS	EUPT-Blank	Carbofuran	Yes, Carbofuran-D_3	1	107 % | 2	EUPT-blank		LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662); Low Experience with amounts < 0,01 mg/kg and Hydrolyse
49	x	Yes	Scope	0.0012		0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	No		74.5 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value based on the entire population was statistically uncertain, no z-scores were calculated.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

OPTIONAL ANALYTES | Carbofuran (part of sum)

Carbofuran (part of sum) (*Assigned value = 0.0030 mg/kg*)*

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
50		Yes	Scope	0.0015		0.001	10	deep frozen	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT			No		109 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
52		Yes	Commodity	FN		0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Pirimicarb-D_6, but not IS corrected, recovery only	1				LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.0040		0.001	5	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Carbofuran	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.0046		0.001	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Carbo-furan and Carbosulfan (separately)	No		105.2 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		No	No	0.0041		0.002	10	slightly frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	None		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	No		87.2 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
62	x	No	No	FN		0.05	10	ambient	Man. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	2	85 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no PSA Clean-up
63		Yes	Scope	0.0090		0.01	10	ambient	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)								LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
66	x	No	No	0.0026		0.001	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	No		69 % | 2	EUPT-blank		LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
67	x	Yes	Scope	0.0025		0.001	10	slightly frozen	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank		Yes, TPP	2	54.9 % | 1	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
69		Yes	No	0.0021		0.001	10	deep frozen	Ultra turrax, 30 min	MeOH, H_2O, 10water/20MeOH	None	No		SEP-Column (Extrelut)		Std. spiked to MATRIX Extract	EUPT-Blank		No		105 % | 2	EUPT-blank		LC-MS/MS (QQQ)	ESI-pos	Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth)
70		Yes		0.0051		0.01	10	just thawed	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (other); PSA/C18/ $MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Carbo-furan and Carbosulfan (separately)	No		112 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.0028		0.002	15	ambient	Mech. shaking, 5 min	ACN	NaOAc/$MgSO_4$	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	Yes, TPP	2		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
72		Yes	Commodity	0.0018		0.001	10	deep frozen	Mech. shaking, 1 min	ACN, 1 % Acetic Acid	NaOAc/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	organic grape		Yes, Isoproturon-D_6	1	89 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
73	x	Yes	Scope	FN		0.01	12	slightly frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank				110 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
74		Yes	Commodity	0.0029		0.001	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Pirimicarb-D_6	1	95 % | 1	EUPT-blank		LC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value based on the entire population was statistically uncertain, no z-scores were calculated.

\# deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

OPTIONAL ANALYTES | Carbofuran (part of sum)

Carbofuran (part of sum) (*Assigned value = 0.0030 mg/kg*)*

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
75	x	Yes	Scope	FN		0.005	10	deep frozen	Mech. shaking, 15 min	EtOAc, C_6H_{12}, mix 1/1	None	No	None	GPC		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Dital-imfos	2		EUPT-blank		GC-MSD		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: extr. solvent (etac) replaced with chex/etac 1/1 mixture
76		Yes	Scope	0.0021		0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Carbo-furan and Benfuracarb (separately)				QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
78		Yes	Commodity	0.00411		0.001	10	deep frozen	Ultra tur-rax, 2 min	MeOH, CH_2Cl_2	NaCl	No	None	Liq.-Liq. Part., ChemElut unbuffered		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	Yes, Carben-dazim-D_4	2	117.9 % | 1	EUPT-blank	0.005 mg/ kg	LC-MS/MS (QQQ)	ESI-pos	Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth)
79		Yes	Scope	0.0020		0.01	10	deep frozen	Ultra turrax, 30 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank				96 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
81	x	No	Commodity	0.0027		0.002	10	deep frozen	Ultra tur-rax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, $NaHCO_3$		Centrifugation, Filtration		Std. spiked to MATRIX Extract					92.1 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
84		Yes	Commodity	0.0049		0.001	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Carbo-furan and Carbosulfan (separately)	Yes, TPP	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		No	No	0.0038		0.001	10	deep frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, after extraction with 10 µL H_2SO_4	Acidic hydr. in extract (EURL-SRM mth), 3h at 80°C	None		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	No		92 % | 1	EUPT-blank	spking 0.010 mg/ kg	LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23); no experience with this method
92		No	Commodity	0.0024		0.001	10	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Carbofuran	No		60 % | 2	EUPT-blank	0.001 mg/ kg	LC-MS/MS (QQQ)	ESI-pos	Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23)
95		Yes	Scope	0.0007		0.001	10	slightly frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$), Freezing out		Std. spiked to MATRIX Extract	EUPT-Blank		No		98 % | 5	QC validation data		LC-MS/MS (QQQ)	pos	QuEChERS – Citrate buffered (EN 15662)
97		Yes	Scope	FN		0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, citrate buffer	None	Freezing out, Dispersive-SPE (PSA/$MgSO_4$), Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	Yes, Isoproturon-D_6	1	84 % | 2	QC validation data	near the result	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
98	x	Yes	Commodity	FN		0.001	10	cold	Man. shaking, 1 min	ACN		No				Std. spiked to MATRIX Extract	EUPT-Blank		No		97 % | 1	EUPT-blank		LC-MS/MS (QQQ)	LC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	0.0019		0.001	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	Acidic hydr. in extract (EURL-SRM mth)	None		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	Yes, TPP	1	80 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Carbofuran (sum): QuEChERS-based Method involving acidic hydrolysis by EURL-SRM (SRM-23); short experience for concentration below 0.01 mg/kg
102		Yes	Scope	0.0017		0.001	10	cold	Mech. shaking, 30 min	ACN		No	None	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
103	x	Yes	Scope	0.0032		0.001	15	just thawed	Ultra tur-rax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None	None		Std. spiked to Pure SOLVENT			No		106 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI-pos	Mini-Luke-Type (Acetone DCM-PE)
106		No	No	FN		0.01	10	ambient	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	Yes, TPP	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value based on the entire population was statistically uncertain, no z-scores were calculated.

\# deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

OPTIONAL ANALYTES | Carbofuran (part of sum)

Carbofuran (part of sum) (*Assigned value = 0.0030 mg/kg*)*

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
107	x	No	No	FN		0.001	10	cold	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Freezing out, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract			Yes, TPP	1	74 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
109		Yes	Scope	0.0031		0.001	10	ambient	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Carbo-furan and Furathiocarb (separately)	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.10 mg/kg	LC-MS/MS (QQQ)	QQQ 6495 ifunnel Agilent	QuEChERS – Citrate buffered (EN 15662)
113		Yes	Scope	0.0032		0.001	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank		Yes, Desme-tryn	1	102 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Scope	0.0017		0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)		Yes, TPP	1	86 % | 3	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
118		Yes	Scope	0.033		0.01	10	just thawed	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Carbofuran	Yes, Atrazine-D_5	1				LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
120		Yes		FN		0.01	10	deep frozen	Man. shaking, 30 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	cucumber		No					LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
121		Yes	No	0.0023		0.001	10	ambient	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		None		Std. spiked to MATRIX Extract	cucumber	Carbofuran	Yes, Anthor	2	90 % | 1	other blank	egg plant	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean-up step
123		Yes	Commodity	0.0013		0.001	10	cold	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (ODS)		Std. spiked to MATRIX Extract	EUPT-Blank		No		95 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
124	x	Yes	Scope	FN		0.01	15	slightly frozen	Ultra tur-rax, 1 min	Acetone, CH_2Cl_2, Pet. Ether	None	No	None	Dessication with Na_2SO_4, Centrifu-gation		Std. spiked to MATRIX Extract	EUPT-Blank		No			EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
125		No	No	0.0027		0.002	10	just thawed	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Citrate-Buffer mix		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Carbofuran						LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: Without clean-up step
126		No	No	FN		0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	NaCl/$MgSO_4$	No		None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Carbofuran			106.7 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modi-fication: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.0027		0.001	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	orange		No		105 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuEChERS – Citrate buffered (EN 15662), Modi-fication: The laboratory employes this method like reference method for the extraction
130		No	Scope	0.0022		0.001	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix			Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to Pure SOLVENT		Carbofuran	Yes, TPP	1				LC-MS/MS (QQQ)	ESI-pos	QuEChERS – Citrate buffered (EN 15662)
3rd-132		Yes	Scope	FN		0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix		None	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TDCPP	2	98 % | 2			LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3rd-134		Yes	No	0.003		0.003	10	ambient	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaOAc/$MgSO_4$		None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Carbo-furan and Carbosulfan (separately)	Yes, other IS	1				LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
3rd-135		Yes	Scope	FN		0.01	15	ambient	Man. shaking, 20 min	ACN + 1 % HOAc	NaOAc/$MgSO_4$			Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Carbofuran	Yes, Etho-prophos	1				LC-MS/MS (QQQ)	MRM	QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: Add15 ml of acidified ACN .Add 6g $MgSO_4$ & 1.5g NaOAc. 3 ml aliquot to 0.45g of $MgSO_4$ & 0.15g of PSA. Transfer 0.1 ml to 0.9 ml UHQ for LCMSMS.

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value based on the entire population was statistically uncertain, no z-scores were calculated.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Chlorate (Assigned value = 0.490 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added? 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.452	-0.3	0.01	10	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to extract ALIQUOTS		No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
2		Yes	Scope	0.470	-0.2	0.02	5	deep frozen		MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	96.1 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
6	x	Yes	No	0.700	1.7	0.01	10	slightly frozen	Man. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	105.5 % | 2	EUPT-blank	(95.6 - 115.3)%	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
7		No	Scope	0.504	0.1	0.02	10	cold	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, Chlorate-$^{18}O_3$	1		slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
8		Yes	No	0.790	2.5	0.01	10	just thawed	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, ILIS	1	102 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
9		Yes	Scope	0.525	0.3	0.01	10	deep frozen	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Chlorate-$^{18}O_3$	1	62 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
10		Yes	No	0.546	0.5	0.01	10	slightly frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Freezing out, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		97 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
12		No	Scope	0.470	-0.2	0.005	10	ambient	Man. shaking, min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation		Std. spiked to Pure SOLVENT		Yes, ILIS	1				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
14		Yes	No	0.525	0.3	0.01	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Dispersive-SPE (other); ODS/GCB		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Chlorate-$^{18}O_3$	1	103 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: clean up
18		Yes	Scope	0.490	0.0	0.002	5	deep frozen	Mech. shaking, 10 min	water with 1 % HOAc, ACN	None	No	Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Chlorate-$^{18}O_3$	1	91 % | 2	EUPT-blank		LC-MS/MS (QQQ)	m/z 83/67	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Extr. with HOAc/acetonitril/water filtration; LC-MS/MS
19	x	Yes	Scope	0.551	0.5	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)		No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1				LC-MS/MS (QQQ)	83/67, 85/69	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
20		Yes	Commodity	0.545	0.5	0.002	10	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	97 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
21		Yes	Commodity	0.524	0.3	0.02	5	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, Addition of FA	Centrifugation		Std. add. to extract ALIQUOTS		Yes, Chlorate-$^{18}O_3$	1	100 % | 1			LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
22		Yes	Scope	0.510	0.2	0.05	10	slightly frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
26		No	No	0.570	0.7	0.01	10	deep frozen	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No		100 % | 2	slope of std. add. to sample portions		LC-MS/MS (QQQ)		in house method
33	x	Yes	Scope	0.527	0.3	0.01	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank	Multi-cali.	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides); traces <<< RL found in blank material
34		Yes	No	1.17	5.6	0.01	10	ambient	Mech. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)		No	None		Std. spiked to MATRIX Extract	lettuce	Yes, other IS	1	120 % | 2	other blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
35	x	Yes	Scope	0.447	-0.3	0.01	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Chlorate-$^{18}O_3$	1		EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Chlorate (Assigned value = 0.490 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added? 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
38		No	No	0.510	0.2	0.05	10	slightly frozen	Man. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Triph-enylphosphine	1	80 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
39		No	No	0.560	0.6	0.2	10	slightly frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		102 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides); Just a test
42		Yes	Scope	0.529	0.3	0.01	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	103 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
43		No	No	0.340	-1.2	0.02	10	deep frozen	Man. shaking, min	MeOH w. 1 % FA (QuPPe solvent)			Centrifugation			EUPT-Blank	Yes, ILIS	1	96 % | 4	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
45		Yes	No	0.248	-2.0	0.01	10	deep frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Chlorate-$^{18}O_3$	1		EUPT-blank	0.05 mg/kg	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
46		Yes	No	0.490	0.0	0.01	10	deep frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT		Yes, ILIS	1	110 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
47		Yes	Commodity	0.492	0.0	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	$NaOAc/MgSO_4$	No	Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME	Yes, TPP	2	83 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: 0.5 % acid
48		Yes	Scope	0.348	-1.2	0.01	10	slightly frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
52		Yes	Commodity	0.488	0.0	0.05	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)		No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
53		Yes	Scope	0.494	0.0	0.01	5	deep frozen	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
57		No	No	0.547	0.5	0.02	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Filtration		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	98.3 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
58		Yes	No	0.102	-3.2	0.05	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	100 % |			LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
63		Yes	Commodity	0.221	-2.2	0.01	10	ambient	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
66	x	Yes	No	0.695	1.7	0.02	10	slightly frozen	Man. shaking w. intervals, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, ILIS	2	94 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
67	x	No	No	0.402	-0.7	0.01	10	slightly frozen	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)		No	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		86.8 % | 1	EUPT-blank	0.5 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: no ILIS was used
70		Yes		0.128	-3.0	0.01	10	just thawed	Man. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to extract ALIQUOTS, Other	EUPT-Blank	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
71		Yes	No	0.411	-0.6	0.01	10	ambient	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1		EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
72		Yes	Commodity	0.554	0.5	0.01	10	deep frozen	Mech. shaking, 1 min	MeOH, 1 % Acetic Acid		No	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Chlorate-$^{18}O_3$	1	104 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
73	x	No	No	0.391	-0.8	0.1	10	slightly frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)		No			Std. spiked to MATRIX Extract	EUPT-Blank			80 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
76		Yes	Scope	0.480	-0.1	0.01	10	cold	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1		QC validation data		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
78		Yes	Commodity	0.471	-0.2	0.01	5	deep frozen	Ultra turrax, 2 min	MeOH	None	No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		92.9 % | 1	EUPT-blank	0.3 mg/kg	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: extraction with MeOH

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Chlorate (Assigned value = 0.490 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
79		Yes	Scope	0.501	0.1	0.01	10	deep frozen	Man. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, ILIS	1	85 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
81	x	No	No	0.400	-0.7	0.05	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, 1 % FA in MeOH	Centrifugation, Filtration		Std. spiked to MATRIX Extract		No		100.3 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Different L-Chromatography conditions - in house LC methods
84		Yes	Commodity	0.540	0.4	0.02	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
86		Yes	Scope	0.468	-0.2	0.01	1	deep frozen	Mech. shaking, 45 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT		Yes, Chlorate-$^{18}O_3$	1	86 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
88		Yes	No	0.485	0.0	0.02	10	deep frozen	Man. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Perchlorate-$^{18}O_4$	1	123 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
90		Yes	No	0.482	-0.1	0.02	10	deep frozen	Mech. shaking, 5 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Fosetyl D_{15}	1	94 % | 1	EUPT-blank	0.100 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
92		Yes	Commodity	0.507	0.1	0.02	10	deep frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
94		Yes	Scope	0.549	0.5	0.01	10	deep frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Freezing out, Centrifugation		Std. spiked to MATRIX Extract, Other	Other Bank	Yes, Chlorate-$^{18}O_3$	1	107 % | 2	EUPT-blank		LC-MS/MS (QQQ)	5 µl inj.	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
95		Yes	Scope	0.433	-0.5	0.005	10	slightly frozen	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, Extr. with Methanol + 1 % FA	Centrifugation, Filtration, Polyester-Einwegfilter 0,45 µm		Std. spiked to MATRIX Extract, Std. Add.	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	105 % | 5	QC validation data	Matrix: lemon, pears	LC-MS/MS (QQQ)	neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
97		Yes	Commodity	0.502	0.1	0.01	2	cold	Mech. shaking, 20 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	92 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
98	x	No	Commodity	0.441	-0.4	0.02	10	cold	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)			None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	88 % | 1	EUPT-blank		ICP-MS	IC LC-MS/MS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Used ion chromatography instead of the columns recommended in the official QUPPE method
99		Yes	Scope	0.562	0.6	0.02	10	deep frozen	Man. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	106 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
102		No	Scope	0.730	2.0	0.01	10	cold	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to Pure SOLVENT		Yes, Chlorate-$^{18}O_3$	2				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: see LC-Details
103	x	No	Scope	0.415	-0.6	0.01	5	just thawed	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, Chlorate-$^{18}O_3$	1	115 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
109		Yes	Scope	0.535	0.4	0.01	10	ambient	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, Methanol 1 % FA	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Chlorate-$^{18}O_3$	1	100 % | 3	EUPT-blank	0.01, 0.05, 0.10 and 0.5 mg/kg	LC-MS/MS (QQQ)	QQQ 6470 Agilent	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
115		Yes	Commodity	0.490	0.0	0.01	10	just thawed	Mech. shaking, 2 min	MeOH	None	No	Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Yes, Chlorate-$^{18}O_3$	2	71 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: MeOH extraction; LC gradient and watery eluens different
116		No	No	0.516	0.2	0.01	10	slightly frozen	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. add. to extract ALIQUOTS		No		105 % | 2	EUPT-blank	0.6 mg/kg	LC-MS/MS (QQQ)	2 MRM; ESI-	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Chlorate (Assigned value = 0.490 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
125		No	No	0.570	0.7	0.01	10	just thawed	Mech. shaking, 5 min	MeOH, H_2O	None	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)							Orbitrap	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Without FA
127		Yes	Scope	0.268	-1.8	0.01	10	slightly frozen	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Perchlorate-^{18}O	1	103 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: The laboratory employes this method like reference method for the extraction
129		Yes	No	0.232	-2.1	0.01	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, ILIS	1	71 % | 5	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
130		Yes	Scope	0.497	0.1	0.01	10	slightly frozen	Mech. shaking, 1 min	water+1 %HOAc, then acetonitrile, ACN					Std. spiked to Pure SOLVENT		Yes, ILIS	1				LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithianon (Assigned value = 0.294 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.160	-1.8	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS		No					LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.268	-0.3	0.02	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables	Yes, other IS	1	87.9 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
3	x	Yes	Scope	0.104	-2.6	0.05	10	ambient	Ultra turrax, 1 min	MeOH, H_2O, 40 ml MeOH/water (90/10)	None	No	None	Filtration, büchner filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Oxfendazole	2	71.3 % | 1	EUPT-blank		LC-MS/MS (QQQ)		40 ml extraction mixutre, ultraturrax 1 min, büchner filtration, volume ajusted at 60 ml
4		Yes	Commodity	0.284	-0.1	0.01	10	deep frozen	Man. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×, FA	None	None		Std. spiked to MATRIX Extract	other organic strawberry	No		71 % | 1	other blank	0.02 mg/kg	LC-MS/MS (QQQ)	4 MRM	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
6	x	Yes	No	0.275	-0.3	0.05	10	slightly frozen	Man. shaking, 2 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	No		104.9 % | 3	EUPT-blank	(100.8 - 103.7 - 110.1)%	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
12		Yes	No	0.290	0.0	0.01		ambient	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. spiked to MATRIX Extract		Yes, other IS	1	110 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
13	x	Yes	Scope	0.280	-0.2	0.01	10	deep frozen	Mech. shaking, 5 min	H_2O with 2M HCl, 5:1, ACNe		just adding the amount of HCl without measuring pH		Centrifugation, Filtration, 5 min at 3000rpm, nylon 0,45um syringe filter		Procedural calibr. (Corr. for Recov.), 3 points	EUPT-Blank	No		90.1 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Agilent 6460	Extr. with water/HCl, 30 min, acetonitrile, mechanical shaking, centrifugation, filtration
14		Yes	No	0.306	0.2	0.02	10	deep frozen	Mech. shaking, 30 min	CH3CN/H_2O/HCL1N 75/15/10	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Atrazine-D_5	1	93 % | 1	EUPT-blank		LC-MS/MS (QQQ)		extraction solvent CH3CN/H_2O/HCL1N 75/15/10 - no clean up
18		Yes	Scope	0.287	-0.1	0.01	5	deep frozen	Ultra turrax, 2 min	Extr. with acetified ACN	None	No	None	Centrifugation, Liq.-Liq.-Part., dichoromethan		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Dithianon-D_4, but not used as IS	1	104 % | 2	EUPT-blank		LC-MS/MS (QQQ)	m/z 296/264 quantifier, m/z 296/82	Extr. with acetified ACN, liquid/liquid partitition with CH_2Cl_2, determination wit h LC-MS/MS, Modification: Extr. with acetified ACN, liquid/ liquid partitition with CH_2Cl_2, determination wit h LC-MS/MS
19	x	Yes	Scope	0.277	-0.2	0.01	5	slightly frozen	Mech. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No		Liq.-Liq. Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	1				LC-MS/MS (QQQ)	296/264, 296/238	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
20		Yes	Commodity	0.305	0.2	0.005	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Nicarbazin	2	97 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	0.390	1.3	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, Buffering		Centrifugation		Std. add. to extract ALIQUOTS		Yes, Bentazone-d6	1	93 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.340	0.6	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No		Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	2				LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
24		Yes	Commodity	0.329	0.5	0.02	5	deep frozen	Man. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		80 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
25		Yes	No	0.320	0.4	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank			92 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithianon (Assigned value = 0.294 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
26		No	No	0.330	0.5	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Nicarbazin	1	100 % | 2	slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
28	x	No	No	0.267	-0.4	0.02	10	slightly frozen	Mech. shaking, 30 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$			None		Std. spiked to MATRIX Extract	EUPT-Blank	No		75 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
30	x	Yes	Commodity	0.748	6.2	0.02	10	deep frozen	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	Yes, 1×		Freezing out		Procedural calibr. (Corr. for Recov.)	Other Bank			100 % |			LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
33	x	Yes	Scope	0.307	0.2	0.01	10	cold	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank	Multiple cali.	LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Citrate buffered (EN 15662), Modification: injection of Extract 1 - no dSPE; no acidification of ACN
34		Yes	No	0.242	-0.7	0.01	10	ambient	Mech. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	lettuce	Yes, Isoprotu-ron-D_6	1	80 % | 2	QC validation data		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
35	x	No	No	0.306	0.2	0.02	10	deep frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Dithianon-D_4	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: centrifugation step at -5°C
39		Yes		0.410	1.6	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/ Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		97 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
40		Yes	No	0.325	0.4	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No				Std. add. to extract ALIQUOTS	EUPT-Blank	Yes, ILIS	1	86 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
41		No	No	1.4	15.1	0.02	10	ambient	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)				Dessication with $MgSO_4$, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Mecoprop-D_3	1	43 % | 1	other strawberry	other straw-berry	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
46		Yes	No	0.0407	-3.4	0.01	10	deep frozen		ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)								Yes, ILIS	1	300 % |	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
47		Yes	No	0.297	0.0	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	$NaOAc/MgSO_4$	No		Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, ILIS	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
50		Yes	Scope	0.323	0.4	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$	Yes, 1×	None	None		Std. spiked to Pure SOLVENT		Yes, Dithianon-D_4	1	104 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17), Modification: No clean up
51		Yes	No	0.380	1.2	0.01	10	deep frozen	Mech. shaking, 25 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		132 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
52		Yes	Commodity	0.024	-3.7	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Carbenda-zim-D_3, but not IS corrected, recovery only	1	91 % | 3	EUPT-blank	0.02; 0.1 and 0.5 mg/kg	LC-Orbitrap		QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.317	0.3	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.107	-2.5	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/ Citrate-Buffer mix	No	None	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	No		74.7 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithianon (Assigned value = 0.294 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
58		Yes	No	0.189	-1.4	0.01	10	slightly frozen	Man. shaking, 2 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		81.2 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
63		Yes	Scope	0.252	-0.6	0.01	10	ambient	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	0.299	0.1	0.01	10	deep frozen	Mech. shaking, 2 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	Yes, 2×, Acidification: 1 % H_2SO_4 in ACN and 0.4 % Acetic acid in ACN (50ul to vial)				Std. spiked to MATRIX Extract	EUPT-Blank	No		110 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
67	x	No	No	0.317	0.3	0.01	10	slightly frozen	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Std. add. to extract ALIQUOTS		Yes, TPP	2	77.3 % | 1	EUPT-blank	0.3 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
70		Yes	Scope	0.350	0.8	0.01	10	just thawed	Man. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		89 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.179	-1.6	0.01	10	ambient	Mech. shaking, 10 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	No			EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
72		Yes	Commodity	0.384	1.2	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Dithianon-D_4	1	105 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
74		Yes	Commodity	0.277	-0.2	0.01	10	cold	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT	EUPT-Blank	Yes, Dithianon-D_4	1	110 % | 1	EUPT-blank		LC-MS/MS (QQQ)		Analysis of Dithianon in Food of Plant Origin using acidified QuEChERS and LC-MS/MS Version 2. Reference Laboratory for Pesticides Requiring Single Re
75	x	No	No	0.019	-3.7	0.02	10	deep frozen	Man. shaking, 15 min	ACN	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		78 % | 4	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: slightly acidified
76		Yes	Scope	0.285	-0.1	0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank				QC validation data		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
79		Yes	Scope	0.868	7.8	0.01	10	deep frozen	Ultra turrax, 30 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	No		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank			80 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
81	x	No	No	0.282	-0.2	0.05	10	deep frozen	Ultra turrax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, 1 % SA in EtOAC		Centrifugation, Filtration		Std. spiked to MATRIX Extract				100.7 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: EtOAc as extraction solvent (substituted ACN)
84		Yes	Commodity	0.280	-0.2	0.02	10	deep frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, TPP	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
89		No	No	0.238	-0.8	0.01	10	deep frozen	Man. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Dithianon-D_4	1	80.4 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
90		No	No	2.57	31.0	0.01	20	deep frozen	Ultra turrax, 10 min	acetone/fuming 37 %HCl 95/5	None	No	None	Filtration, Centrifugation, GF/C		Std. spiked to MATRIX Extract	Other Bank	No		71 % | 1	other organic strawberry	other org. strawberry, 0.100 mg/kg	LC-MS/MS (QQQ)		Unknown; specific extraction with 5 % fuming HCl

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithianon (Assigned value = 0.294 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
91	x	Yes	Commodity	0.260	-0.5	0.01	10	ambient	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×, H_2SO_4		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		75.2 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
92		Yes	Commodity	0.313	0.3	0.02	10	deep frozen	Mech. shaking, 3 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No					LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
94		Yes	Scope	0.405	1.5	0.01	10	deep frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	Yes, 1×, see A-QuECHERS		Centrifugation, Filtration		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No	1	124 % | 1	EUPT-blank	via std. add. to EUPT-blank (0.5 mg/kg)	LC-MS/MS (QQQ)	1 µl inj.	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
95		Yes	Scope	FN	-3.9	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 1×	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		89 % | 1	other blank	Matrix: lemon; SRM 12	LC-MS/MS (QQQ)	neg	QuEChERS – Citrate buffered (EN 15662)
97		Yes	Scope	0.300	0.1	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$		None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Dithianon-D_4	1	78 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
98	x	No	Commodity	0.299	0.1	0.02	10	cold	Man. shaking,	ACN				None		Std. spiked to MATRIX Extract	EUPT-Blank	No		80 % | 1	EUPT-blank		LC-MS/MS (QQQ)	LC-MS/MS	QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
102		Yes	Scope	0.250	-0.6	0.01	10	cold	Mech. shaking, 30 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)		Yes, 1×, use ACN with pH 1 for extraktion	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Dithianon-D_4	2				LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
103	x	No	No	0.323	0.4	0.02	10	slightly frozen	Mech. shaking, 3 min	ACN + 1 % FA (A-QuECHERS)	None	No	None	None		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, Dithianon-D_4	1	107 % | 1	EUPT-blank	50 µg/kg	LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
104		Yes	No	0.271	-0.3	0.02	10	cold	Mech. shaking, 25 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	No	None	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	No		101 % | 3	EUPT-blank		LC-MS/MS (QQQ)	ESI	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
107	x	Yes	No	0.188	-1.4	0.02	10	cold	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$/ Citrate-Buffer mix	Yes, 2×, 1 time with H_2SO_4, second time with NaOH	Acidic hydrolysis prior or during extraction	Freezing out		Std. spiked to MATRIX Extract		Yes, Nicarbazin	1	90 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
109		Yes	Scope	0.346	0.7	0.01	10	just thawed	Mech. shaking, 1 min	ACN + 500 uL HCl 2N	NaCl/$MgSO_4$	Yes, 1×, 500 uL HCl 2N	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Nicarbazin	1	100 % | 3	EUPT-blank	0.01, 0.05, 0.10. 0.25, 0.50 mg/kg	LC-MS/MS (QQQ)	QQQ 6495 ifunnel Agilent	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: 10 ml ACN + 500 uL HCl 2N
113		No	Scope	0.300	0.1	0.02	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/ Citrate-Buffer mix			None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Desmetryn	1	90 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Scope	0.280	-0.2	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	None	Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Yes, TPP	1	70 % | 3	EUPT-blank		LC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		Yes	No	0.438	2.0	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$	No		Filtration		Std. add. to extract ALIQUOTS		Yes, Tris(1,3-dicloroisopropyl) phosphate	1	99 % | 2	EUPT-blank	0.4 mg/kg	LC-MS/MS (QQQ)	2 MRM ESI-	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
125		No	No	0.354	0.8	0.01	10	just thawed	Mech. shaking, 5 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	Yes, 1×, AcN 1 % FA		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)						LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Dithianon (Assigned value = 0.294 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
127		Yes	Commodity	0.261	-0.4	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	None	None		Std. spiked to MATRIX Extract	Peach	Yes, Dithianon-D_4	1	93 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Xevo TQS Micro - Acquity Waters	SRM-13 only for the extraction
129		Yes	Scope	0.233	-0.8	0.01	10	deep frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		82 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
130		No		0.210	-1.1	0.02	10	slightly frozen	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$			Centrifugation		Std. spiked to Pure SOLVENT		Yes, Diuron-D_6	1	84 % | 3	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
3rd-131		No	No	0.340	0.6	0.01	10	just thawed	Man. shaking, 1 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$		None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		83.5 % | 3	QC validation data	level; 0.10-0.40 mg/kg	LC-MS/MS (QQQ)	LC Agilent 1200 LC/MS Agilent Triple Quad 6410b	QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Phosphonic acid (Assigned value = 19.3 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	15.9	-0.7	0.01	10	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to extract ALIQUOTS		No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
2		Yes	Scope	17.9	-0.3	0.05	5	deep frozen		MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	Yes, Phosphonic acid-$^{18}O_3$	1	101 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
6	x	No	No	20.9	0.3	0.1	10	slightly frozen	Man. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Phosphonic acid-$^{18}O_3$	1	98 % | 4	EUPT-blank	(91.1-96.0-99.3-105.7)%	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
7		No	Scope	20.34	0.2	0.05	10	cold	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	Yes, Perchlorate-$^{18}O_4$	1		slope of std. add. to sample portions		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
8		Yes	No	16.7	-0.5	0.2	10	just thawed	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		90 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
9		Yes	No	51.7	6.7	0.05	10	deep frozen	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
10		Yes	No	27.9	1.8	0.03	10	slightly frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Freezing out, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	EUPT-Blank	No		112 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
12		Yes	Scope	21.0	0.4	0.1	5	ambient	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)		No	Centrifugation		Std. spiked to Pure SOLVENT		Yes, ILIS	1				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
14		Yes	Scope	17.78	-0.3	0.56	10	deep frozen	Mech. shaking, 60 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Dispersive-SPE (other); ODS/GCB		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, FosetyI-Al-D_{15}	3	71 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: clean up
18		Yes	Scope	20.1	0.2	0.1	5	ambient	Mech. shaking, 15 min	MeOH	None	No	Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Phosphonic acid-$^{18}O_3$	1	106 % | 2	EUPT-blank		LC-MS/MS (QQQ)	m/z 81/79	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Extr. with water/MeOH; filtration; LC-MS/MS
21		Yes	Commodity	16.4	-0.6	0.05	5	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, Addition of FA	Centrifugation				Yes, Phosphonic acid-$^{18}O_3$	1	100 % | 1	slope of std. add. to sample portions		LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
22		Yes	Scope	22.4	0.7	0.05	10	slightly frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
26		No	No	25.3	1.3	0.1	10	deep frozen	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent), H_2O	None	No	Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	No		100 % | 2	slope of std. add. to sample portions		LC-MS/MS (QQQ)		in house method
33	x	Yes	Scope	17.3	-0.4	0.05	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	100 % | 1	EUPT-blank	Multi-cali.	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
34		Yes	No	67.6	10.0	0.01	10	ambient	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)		No	None		Std. spiked to MATRIX Extract	lettuce	Yes, Diethylphosphate	1	80 % | 2	QC validation data		LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17)
35	x	No	No	19.9	0.1	0.05	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, Phosphonic acid-$^{18}O_3$	1		EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
41		Yes	No	25	1.2	0.05	2	ambient	Mech. shaking, 20 min	Methanol + 1 % Hac			Centrifugation, Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		112 % | 1	other blank	spinach	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Phosphonic acid (Assigned value = 19.3 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
42		Yes	Scope	18.85	-0.1	0.03	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	Other Bank	Yes, Phosphonic acid-$^{18}O_3$	1	104 % | 1	other blank strawberry	other blank strawberry	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides); small amount Phosphonic acid in blank
47		Yes	Commodity	14.2	-1.1	0.2	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	$NaOAc/MgSO_4$	No	Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, ILIS	1	87 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: 0.5 % acid
52		Yes	No	15.3	-0.8	0.05	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)		No	Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Phosphonic acid-$^{18}O_3$	1				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
53		Yes	Scope	21.026	0.4	0.02	5	deep frozen	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
57		No	No	5.14	-2.9	0.02	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Filtration		Std. add. to sample PORTIONS (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	80.9 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
58		Yes	No	28	1.8	0.05	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Phosphonic acid-$^{18}O_3$	1	100 % |			LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
63		Yes	Commodity	0.185	-4.0	0.01	10	ambient	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)							LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
64		Yes	Scope	19.1	0.0	0.1	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, Methanol w. 1 % FA	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, ILIS	3	92 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
67	x	No	No	13.7	-1.2	0.02	10	slightly frozen	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)		No	None		Std. spiked to MATRIX Extract	EUPT-Blank	No		104 % | 1	EUPT-blank	0.5 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: no ILIS was used
70		Yes		9.1	-2.1	0.01	10	just thawed	Man. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. add. to extract ALIQUOTS, Other	EUPT-Blank	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
72		Yes	Commodity	18.95	-0.1	0.1	10	deep frozen	Mech. shaking, 1 min	MeOH, 1 % Acetic Acid		No	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Phosphonic acid-$^{18}O_3$	1	97 % | 2	EUPT-blank	0.1 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
76		Yes	Scope	18.05	-0.3	0.01	10	cold	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)		No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, Phosphonic acid-$^{18}O_3$	1		QC validation data		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
78		Yes	Commodity	17.4	-0.4	0.1	5	deep frozen	Ultra turrax, 2 min	MeOH	None	No	Centrifugation		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)	No		82.5 % | 1	EUPT-blank	1.2 mg/kg	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: extraction with MeOH
79		Yes	Scope	23.03	0.8	0.035	10	deep frozen	Man. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No			Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, ILIS	1	89 % | 3	other blank strawberry	other blank strawberry	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
81	x	No	Commodity	21	0.4	0.05	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, 1 % FA in MeOH	Centrifugation, Filtration		Std. spiked to MATRIX Extract		No		102.9 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Different L-Chromatography conditions - in house LC methods
84		Yes	Commodity	22	0.6	0.05	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Yes, ILIS	1	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
86		Yes	Scope	14.5	-1.0	0.1	1	deep frozen	Mech. shaking, 45 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT		Yes, Phosphonic acid-$^{18}O_3$	1	114 % | 2	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
90		Yes	No	9.95	-1.9	0.05	10	deep frozen	Man. shaking, 1 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation		Std. spiked to MATRIX Extract	Other Bank	No		115 % | 1	other organic strawberry	other org. strawberry, 0.500 mg/kg	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
92		Yes	Commodity	20.0	0.2	0.05	10	deep frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, ILIS	1				LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Phosphonic acid (Assigned value = 19.3 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added? 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
94		Yes	Scope	22.7	0.7	0.1	10	deep frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Freezing out, Centrifugation		Std. spiked to MATRIX Extract, Other	Other Bank	Yes, Phosphonic acid-$^{18}O_3$	1	124 % | 2	other blank strawberry	other blank strawberry	LC-MS/MS (QQQ)	1 µl inj.	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
95		No	No	14.6	-1.0	0.05	10	slightly frozen	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, Extr. with Methanol + 1 % FA	Centrifugation, Filtration, Polyester-Einwegfilter 0,45 µm		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Phosphonic acid-$^{18}O_3$	1	108 % | 5	other blank	Interlab. Validation (matrix: lemon)	LC-MS/MS (QQQ)	neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
97		Yes	Commodity	20.9	0.3	0.01	2	cold	Mech. shaking, 20 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None		Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Phosphonic acid-$^{18}O_3$	1	91 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
98	x	No	No	21.2	0.4	0.05	10	cold	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)		No	None		Std. add. to sample PORTIONS (Corr. for Recov.)		No					ICP-MS	IC LC-MS/MS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Used ion chromatography instead of the columns recommended in the official QUPPE method
99		Yes	Commodity	7.91	-2.4	0.1	10	deep frozen	Man. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	95 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
102		No	Scope	20.5	0.3	0.3	10	cold	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)		No	Centrifugation		Std. spiked to Pure SOLVENT		Yes, Phosphonic acid-$^{18}O_3$	2				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: see LC-Details
103	x	No	No	20.4	0.2	0.05	5	just thawed	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, Phosphonic acid-$^{18}O_3$	1	100 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
109		Yes	Scope	22.5	0.7	0.05	10	ambient	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, Methanol 1 % FA	None		Procedural calibr. (Corr. for Recov.)	other strawberry	Yes, Phosphonic acid-$^{18}O_3$	1	100 % | 3	EUPT-blank	0.01, 0.05, 0.10 and 0.5 mg/kg	LC-MS/MS (QQQ)	QQQ 6470 Agilent	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides); We do not use blank Material for calibration Matrix-matched. We used another blank strawberry.
115		Yes	No	29.0	2.0	0.1	10	just thawed	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent), H_2O	None	No	Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	Yes, Phosphonic acid-$^{18}O_3$	2	95 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Extr. solvent 1:1 MeOH:water acidified 1 % Formic
116		No	No	17.4	-0.4	0.05	10	slightly frozen	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. add. to extract ALIQUOTS		No		115 % | 2	EUPT-blank	25 mg/kg	LC-MS/MS (QQQ)	2 MRM; ESI-	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
125		No	No	18.0	-0.3	0.01	10	just thawed	Mech. shaking, 5 min	MeOH, H_2O	None	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)							Orbitrap	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Without FA
127		Yes	Scope	20.1	0.2	0.05	10	slightly frozen	Mech. shaking, 5 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Yes, Phosphonic acid-$^{18}O_3$	1	95 % | 1	EUPT-blank		LC-MS/MS (QQQ)	Sciex 5500 - Agilent 1290	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: The laboratory employes this method like reference method for the extraction
129		Yes	No	8.41	-2.3	0.05	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, ILIS	1	80 % | 5	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
130		Yes	Scope	26.5	1.5	0.01	10	slightly frozen	Mech. shaking, 10 min	MeOH w. 1 % FA (QuPPe solvent)					Std. spiked to Pure SOLVENT		Yes, ILIS	1	107 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
3rd-138		Yes	No	17.4	-0.4	0.1	10	just thawed		MeOH w. 1 % FA (QuPPe solvent)					Std. spiked to MATRIX Extract	EUPT-Blank			98 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

N-Acetyl glyphosate (Assigned value = 0.100 mg/kg)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature #	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Transformation	Cleanup		Calibration approach	Matrix used for calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
6	x	Yes	No	FN	-3.2	0.1	10	slightly frozen	Man. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to MATRIX Extract	Test Item (std. add. approach)	No					LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
8		Yes	No	0.093	-0.3	0.05	10	just thawed	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	No		105 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
20		No	No	0.069	-1.2	0.02	10	deep frozen	Mech. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		96 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides); Analyzed for the first time within EUPT SRM12
25		Yes	No	0.093	-0.3	0.05	10	slightly frozen	Mech. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	Filtration		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		99 % |	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
33	x	No	No	0.134	1.3	0.02	10	cold	Man. shaking, 1 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 1	EUPT-blank	Multi-cali.	LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
35	x	No	No	0.125	1.0	0.02	10	deep frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Yes, N-Acetyl-glyphosate-D_3	1		EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
39		No		0.121	0.8	0.05	10	slightly frozen	Mech. shaking, 15 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	No		100 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
52		Yes	No	0.139	1.5	0.05	10	deep frozen	Mech. shaking, 45 min	MeOH w. 1 % FA (QuPPe solvent)		No		Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1				LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
76		No	Scope	0.093	-0.3	0.01	10	cold	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	No				Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No			QC validation data		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
81	x	No	No	0.106	0.2	0.05	10	deep frozen	Mech. shaking, 30 min	MeOH w. 1 % FA (QuPPe solvent)	None	Yes, 1×, 1 % FA in MeOH		Centrifugation, Filtration		Std. spiked to MATRIX Extract		No		98.4 % | 3	EUPT-blank		LC-MS/MS (QQQ)	Waters Xevo TQMS	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Different L-Chromatography conditions - in house LC methods
97		No	Scope	0.093	-0.3	0.02	2	cold	Mech. shaking, 20 min	H_2O, MeOH w. 1 % FA (QuPPe solvent)	None		None	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-^{13}C,$^{15}N_2$	1	96 % | 2	slope of std. add. to sample portions	near the result	LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
99		Yes	Scope	0.084	-0.7	0.02	10	deep frozen	Man. shaking, 20 min	MeOH w. 1 % FA (QuPPe solvent)	None	No		None		Std. spiked to MATRIX Extract	EUPT-Blank	Yes, Glyphosate-1,2-$^{13}C_2$,^{15}N	1	92 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
103	x	No	No	0.094	-0.3	0.02	5	just thawed	Mech. shaking, 3 min	MeOH w. 1 % FA (QuPPe solvent)	None	No	None	None		Std. spiked to Pure SOLVENT, Rec. Factor		Yes, N-Acetyl-glyphosate-D_3	1	97 % | 1	EUPT-blank		LC-MS/MS (QQQ)	ESI-neg	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides)
109		Yes	No	0.090	-0.4	0.01	2	ambient	Mech. shaking, 1 min	Water 0.1 % FA	None	Yes, 1×, Water 0.1 % FA	None	supernatant was passed-through Oasis HLB cartridge		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	No		100 % | 3	EUPT-blank	0.01, 0.05, 0.10 and 0.5 mg/kg	LC-MS/MS (QQQ)	QQQ 6470 Agilent	SiCA method - Acidif. w. 0.1 % FA in H_2O
115		No	No	0.071	-1.2	0.05	10	just thawed	Mech. shaking, 2 min	MeOH w. 1 % FA (QuPPe solvent), H_2O	None	No		Centrifugation, Filtration		Std. spiked to Pure SOLVENT, Rec. Factor	None (pure Water/Solvent)	No		108 % | 3	EUPT-blank		LC-MS/MS (QQQ)		QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Extr. solvent 1:1 MeOH:water acidified 1 % Formic; Not in routine scope yet
125		No	No	0.104	0.1	0.01	10	just thawed	Mech. shaking, 5 min	MeOH, H_2O	None	No		None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)						Orbitrap	IC-Orbitrap	QuPPe-Method for products of plant origin (EURL-SRM Mth for polar pesticides), Modification: Without FA

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

ADDITIONAL ANALYTES | Captan (sum)

Captan (sum) (*Assigned value* = 0.302 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.252	*-0.7*	0.005											Captan and THPI (separately)								Calculation of sum using conversion factor
2		Yes	Scope	0.277	*-0.3*	0.01	10	deep frozen	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, other IS	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
4		Yes	Scope	0.246	*-0.7*	0.01	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, sodium hydrogen carbonate	GPC, Envirosep HPGPC column		Std. spiked to MATRIX Extract	other organic strawberry	Captan and THPI (separately)	Yes, triflura-lin D_{14}	2	93 % | 1	other organic strawberry	0.02 mg/kg, org. strawberry	GC-MS/MS (QQQ)	3 MRM	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
7		Yes	Scope	0.243	*-0.8*	0.01																			Calculation of sum using conversion factor
9		Yes	No	0.137	*-2.2*	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	No		100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
14		Yes	No	0.328	*0.3*		10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank		Yes, Atrazine-D_5	1				LC-MS/MS (QQQ)	sum captan + THPI	QuEChERS – Citrate buffered (EN 15662)
17	x	No	Scope	0.251	*-0.7*	0.02	10	slightly frozen	Mech. shaking, 2 min	ACN, EtOAc	None	No	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, Phenan-threne-D_{10}	2	101 % | 2	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: RP-SPE cleanup step
18		Yes	Scope	0.313	*0.2*		10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to MATRIX Extract	other straw-berry		Yes, Captan-D_6	1		EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	0.351	*0.7*	0.02	10	slightly frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Liq.-Liq. Part., Dessica-tion with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, Captan-D_6	1				GC-TOF		QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	0.324	*0.3*	0.007	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	Yes, 1×, addi-tion of H_2SO_4, pH 1	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	0.313	*0.2*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 2×, 1) Buffering; 2) FA	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to ex-tract ALIQUOTS		Captan and THPI (separately)	Yes, ILIS	1				GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.390	*1.2*	0.015																			Calculation of sum using conversion factor
25		Yes	No	0.478	*2.3*	0.08	10	slightly frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, Isopro-turon-D_6 + bormophos methyl	1	94 % | 1	EUPT-blank	calculated	LC-TOF	Captan: LC-TOF / THPI: GC-MS	QuEChERS – Citrate buffered (EN 15662)
26		No	No	0.200	*-1.3*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sam-ple PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan	Yes, Anthra-cene	1	100 % | 2	slope of std. add. to sample portions		GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662)
29	x	No	No	0.315	*0.2*		10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No					Captan: GC-ECD, THPI: GC-MS/MS	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789); Subcontracted as per routine, Only Captan included in accredited scope, THPI has LOD = 0.01 mg/kg, i.e. new residue definition is not fully covered.
33	x	Yes	Scope	0.267	*-0.5*	0.01	10	just thawed	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, Captan-D_6	1	91 % | 1	EUPT-blank	Multiple cali.	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	0.341	*0.5*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to sam-ple PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan and THPI (separately)	Yes, Captan-D_6	1		EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: centrifugation step at -5°C

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

ADDITIONAL ANALYTES | Captan (sum)

Captan (sum) (*Assigned value* = 0.302 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
39		Yes		0.404	*1.4*	0.02	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, bromophos	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: clean up
41		No	No	0.316	*0.2*	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)	Yes, TPP	1		other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	0.336	*0.5*	0.01																			Calculation of sum using conversion factor
46		Yes	No	0.282	*-0.3*	0.01	10	deep frozen									Captan and THPI (separately)								QuEChERS – Citrate buffered (EN 15662)
47		Yes	No	0.405	*1.4*	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	$NaOAc/MgSO_4$	No	Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME		Yes, Ethyl-parathion-D_{10}	2	78 % | 1	EUPT-blank		GC-(μ) ECD		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		Yes	Scope	0.254	*-0.6*	0.02	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, TDCPP	2				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.155	*-1.9*	0.02	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	No			EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
50		No	No	0.263	*-0.5*	0.01	10	deep frozen	Mech. shaking, 30 min	EtOAc	None	No	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-28	2	104 % | >5	EUPT-blank		GC-MS/MS (QQQ)		Calculation of sum using conversion factor
52		Yes	Commodity	0.338	*0.5*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, TPP, but not IS corrected, recovery only	1		EUPT-blank	0.5 mg/kg	GC-MS/MS (QQQ)	Addition of Analytical Protect. before measure-ment	QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.209	*-1.2*	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)	Yes, PCB-31	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.185	*-1.5*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	No			EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	No	0.565	*3.5*	0.01	10	slightly frozen	Man. shaking, 1 min	EtOAc	Other	No	Dispersive-SPE (other); $MgSO_4$/C18/PSA		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, TDCPP	1	106.5 / 112.8 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Not buffered, partitioning salt: Na_2SO_4 (10 g)
61		No	No	0.310	*0.1*	0.005	10	deep frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)										GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	0.290	*-0.2*	0.005	10	deep frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	2	70 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
66	x	No	No	0.209	*-1.2*	0.02	10	slightly frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, TPP	2	81 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
70		No		0.148	*-2.0*	0.01	10	just thawed	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (other); PSA/C18/$MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Captan	Yes, TDCPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.158	*-1.9*	0.01	15	ambient	Mech. shaking, 5 min	ACN	$NaOAc/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, TPP	2		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
72		Yes	No	0.294	*-0.1*	0.05	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None		Std. spiked to MATRIX Extract	organic let-tuce/pepper	Captan and THPI (separately)	Yes, Chlorpy-rifos-D_{10}	1		EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
73	x	No	No	0.340	*0.5*	0.02	10	slightly frozen	Ultrasonic bath, 10 min	Acetone, CH_2Cl_2, petroleum ether	None	No			Std. spiked to MATRIX Extract	EUPT-Blank				80 % | 3	EUPT-blank		GC-(μ) ECD		Mini-Luke-Type (Acetone DCM-PE)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Captan (sum) (*Assigned value* = 0.302 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
74		No	No	0.284	*-0.2*	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, Parathion-d10	1		EUPT-blank		GC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time
76		Yes	Scope	0.299	*0.0*	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)	Yes, Captan- D_6	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
78		No	No	0.289	*-0.2*	0.01																			S-19 (§64 LFGB L00.00-334); gem. ADV-Katalog Captan+1,989THPI
79		Yes	Scope	0.273	*-0.4*	0.01	10	deep frozen	Ultra turrax, 30 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank				105 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
81	x	No	No	0.306	*0.1*	0.01	10	deep frozen	Ultra turrax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract					102 % | 3	EUPT-blank		GC-MS/MS (QQQ)	Thermo TSQ QUANTUM XLS Ultra	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
84		Yes	Commodity	0.289	*-0.2*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)				EUPT-blank				QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.426	*1.6*	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	None		Std. spiked to MATRIX Extract		Captan and THPI (separately)	Yes, Terbutryn-D_5	1	81 % | 2	EUPT-blank	rec. average of the two analysed comps.	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.279	*-0.3*	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, other IS	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		Yes	No	0.283	*-0.2*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No		90 % | 1	EUPT-blank	0.010 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuECHERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17); difficulties for analysing it (captan)
92		Yes	Commodity	0.383	*1.1*	0.03											Captan and THPI (separately)	No							Calculation of sum using conversion factor
94		No	Scope	0.291	*-0.1*	0.03	10	deep frozen									Captan and THPI (separately)								Calculation of sum using conversion factor
95		Yes	Scope	0.421	*1.6*	0.01																			Calculation of sum using conversion factor
97		Yes	Scope	0.287	*-0.2*	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, citrate buffer	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Captan-D_6	1	94 % | 2	slope of std. add. to sample portions	near the result	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
98	x	No	No	0.256	*-0.6*	0.01	10	cold	Man. shaking, 1 min	ACN			Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, THPI	1		EUPT-blank		GC-MS/MS (QQQ)	GC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	0.411	*1.4*	0.02	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, TPP	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	0.420	*1.6*	0.01	10	cold	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank							GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
103	x	Yes	Scope	0.331	*0.4*	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	No			EUPT-blank	50 µg/kg	GC-MS/MS (QQQ)	EI-pos	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	No	0.342	*0.5*	0.01	10	cold	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	No		94 % | 3	EUPT-blank		GC-(µ) ECD		QuEChERS – Citrate buffered (EN 15662)
105	x	Yes	Scope	0.330	*0.4*	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration, Filtration through anhydrous sodium sulfate		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No			EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

ADDITIONAL ANALYTES | Captan (sum)

Captan (sum) (*Assigned value* = 0.302 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
106		No	No	0.300	*0.0*	0.01	10	ambient	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
109		Yes	No	0.301	*0.0*	0.01	10	ambient	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	THPI	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	QQQ 7000C Agilent	QuEChERS – Citrate buffered (EN 15662)
113		No	Scope	0.288	*-0.2*	0.01																			Calculation of sum using conversion factor
115		Yes	Scope	0.183	*-1.6*	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, PCB-153	1	106 % | 3	EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		No	No	0.322	*0.3*	0.03	10	slightly frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Other								GC-MS/MS (QQQ)	2 MRM; EI	QuEChERS – Citrate buffered (EN 15662); the sum was calculated from the values of Captan and THPI
125		No	No	0.248	*-0.7*	0.05	10	just thawed	Mech. shaking, 15 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Captan and THPI (separately)						GC-MS/MS (QQQ)	Cool On Column	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: 10 g sample + 10 ml EtAc + 8 g $MgSO_4$ + 1.5 g NaCl
126		No	No	0.231	*-0.9*	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No	GPC		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, TPP	1	91.7 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	0.446	*1.9*	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, Captan-D_6	1		EUPT-blank		GC-MSD	Bruker 320 - Bruker 450GC	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: The laboratory employes this method like reference method for the detection mode (NCI)
129		Yes	No	0.506	*2.7*	0.01	15	deep frozen	Mech. shaking, 15 min	15 ml 1 % Hac in MeCN	$NaOAc/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	No		70 % | 4	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
130		No	Scope	0.288	*-0.2*	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	Centrifugation		Std. add. to extract ALIQUOTS		Captan and THPI (separately)	Yes, ILIS	2				GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Folpet (sum) (*Assigned value* = 1.195 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.961	*-0.8*	0.005											Folpet and Phthalimide (separately)								Calculation of sum using conversion factor
2		Yes	Scope	1.12	*-0.3*	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, other IS	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
4		Yes	Scope	1.21	*0.1*	0.01	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, sodium hydrogen carbonate	GPC, Envirosep HPGPC column		Std. spiked to MATRIX Extract	other organic strawberry	Folpet and Phthalimide (separately)	Yes, triflura-lin D_{14}	2	100 % | 1	other organic strawberry	0.02 mg/kg, org. strawberry	GC-MS/MS (QQQ)	3 MRM	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
7		Yes	Scope	0.973	*-0.7*	0.01																			Calculation of sum using conversion factor
13	x	Yes	No	1.93	*2.5*	0.02	18	deep frozen	Ultra turrax, 3 min	EtOAc, 100 ml	None	No	Centrifugation, GPC, 5 min at 4000rpm		Std. spiked to MATRIX Extract, 5 points	EUPT-Blank	Folpet and Phthalimide (separately)	No		81.4 % | 3	other straw-berry	other strawberry	GC-(μ) ECD	Agilent 6890	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
14		Yes	No	1.24	*0.2*		10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank		Yes, Atrazine-D_5	1				LC-MS/MS (QQQ)	sum folpet + PI	QuEChERS – Citrate buffered (EN 15662)
17	x	No	Scope	1.19	*0.0*	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN, EtOAc	None	No	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, Phenan-threne-D_{10}	2	99 % | 2	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: RP-SPE cleanup step
18		Yes	Scope	1.255	*0.2*		10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to MATRIX Extract	other straw-berry		Yes, Folpet-D_4	1		EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	1.54	*1.2*	0.02	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Liq.-Liq. Part., Dessica-tion with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, Folpet-D_4	1				GC-TOF		QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	1.196	*0.0*	0.015	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	Yes, 1×, addi-tion of H_2SO_4, pH 1	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3	88 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	1.30	*0.4*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 2×, 1) Buffering; 2) FA	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to ex-tract ALIQUOTS		Folpet and Phthalimide (separately)	Yes, ILIS	1				GC-MSD	NCI	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	1.37	*0.6*	0.01																			Calculation of sum using conversion factor
25		Yes	No	1.736	*1.8*	0.08	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, Bromophos methyl	1	94.7 % | 1	EUPT-blank	calculated	GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662)
26		No	No	2.00	*2.7*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sam-ple PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Folpet	Yes, Anthra-cene	1	100 % | 2	slope of std. add. to sample portions		GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662)
27		No		0.0759	*-3.7*	0.01	10	deep frozen	Ultra turrax, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
29	x	No	No	1.16	*-0.1*		10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)	EI	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789); Only Folpet included in accredited scope, Phtalimide using GC-MS/MS, not accredited yet, has LOD = 0.01 mg/kg, i.e. new residue definition is not fully covered.
33	x	Yes	Scope	1.12	*-0.3*	0.01	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, Captan-D_6	1	99 % | 1	EUPT-blank	Multiple cali.	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Folpet (sum) (*Assigned value* = 1.195 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
35	x	No	No	1.44	*0.8*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Folpet and Phthalimide (separately)	Yes, Folpet-D_4	1		EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: centrifugation step at -5°C
39		Yes		2.58	*4.6*	0.02	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, bromophos	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: clean up
41		No	No	0.754	*-1.5*	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP	1		other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	1.074	*-0.4*	0.01																			Calculation of sum using conversion factor
46		Yes	No	1.114	*-0.3*	0.01	10	deep frozen									Folpet and Phthalimide (separately)								QuEChERS – Citrate buffered (EN 15662)
47		Yes	No	0.260	*-3.1*	0.02	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	NaOAc/$MgSO_4$	No	Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME		Yes, Ethyl-parathion-D_{10}	2	66 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		Yes	Scope	1.347	*0.5*	0.02	10	slightly frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TDCPP	2				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.805	*-1.3*	0.02	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	No			EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
50		No	No	1.236	*0.1*	0.01	10	deep frozen	Mech. shaking, 30 min	EtOAc	None	No	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-28	2	106 % | >5	EUPT-blank		GC-MS/MS (QQQ)		Calculation of sum using conversion factor
52		Yes	Commodity	1.740	*1.8*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP, but not IS corrected, recovery only	1		EUPT-blank	0.5 mg/kg	GC-MS/MS (QQQ)	Addition of Analytical Protect. before measurement	QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	1.131	*-0.2*	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, PCB-31	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	1.10	*-0.3*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	No			EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	No	2.11	*3.1*	0.01	10	slightly frozen	Man. shaking, 1 min	EtOAc	Other	No	Dispersive-SPE (other); $MgSO_4$/C18/PSA		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, TDCPP	1	76.3 / 89.2 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Not buffered, partitioning salt: Na_2SO_4 (10 g)
61		No	No	1.33	*0.5*	0.005	10	deep frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)										GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	1.181	*0.0*	0.005	10	deep frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, ILIS	1	82 % | 1	EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
66	x	No	No	0.579	*-2.1*	0.02	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet and Phthalimide (separately)	Yes, Aldrin	2	77 % | 2	EUPT-blank				Calculation of sum using conversion factor
70		Yes		0.960	*-0.8*	0.01	10	just thawed	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (other); PSA/C18/$MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Folpet	Yes, TDCPP	1	0 % |	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Folpet (sum) (*Assigned value* = 1.195 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
71		Yes	No	0.828	*-1.2*	0.01	15	ambient	Mech. shaking, 5 min	ACN	$NaOAc/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, TPP	2		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
72		Yes	No	1.188	*0.0*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None		Std. spiked to MATRIX Extract	organic lettuce/pepper	Folpet and Phthalimide (separately)	Yes, Chlorpyrifos-D_{10}	1		EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
73	x	No	No	1.15	*-0.2*	0.02	10	slightly frozen	Ultrasonic bath, 10 min	Acetone, CH_2Cl_2, petroleum ether	None	No			Std. spiked to MATRIX Extract	EUPT-Blank				85 % | 3	EUPT-blank		GC-(μ) ECD		Mini-Luke-Type (Acetone DCM-PE)
74		No	No	1.13	*-0.2*	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, Parathion-d10	1		EUPT-blank		GC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time
76		Yes	Scope	1.247	*0.2*	0.01	10	cold	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, PCB-31	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
78		No	No	1.208	*0.0*	0.01																			S-19 (§64 LFGB L00.00-334); gem. ADV-Katalog Folpet+2,016PI
79		Yes	No	1.19	*0.0*	0.01	10	deep frozen	Ultra turrax, 30 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank				118 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
81	x	No	No	1.09	*-0.4*	0.01	10	deep frozen	Ultra turrax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract					94 % | 3	EUPT-blank		GC-MS/MS (QQQ)	Thermo TSQ QUANTUM XLS Ultra	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
84		Yes	Commodity	1.146	*-0.2*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet and Phthalimide (separately)				EUPT-blank				QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.697	*-1.7*	0.01	10	slightly frozen	Mech. shaking, 45 min	ACN, MeOH	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	None		Std. spiked to MATRIX Extract		Folpet and Phthalimide (separately)	Yes, Folpet-D_4	1	84 % | 2	EUPT-blank	rec. average of the two analysed comps.	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	1.27	*0.3*	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, other IS	1		EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		Yes	No	0.963	*-0.8*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No		90 % | 1	EUPT-blank	0.010 mg/kg	LC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17); difficulties for analysing it (folpet)
92		Yes	Commodity	1.07	*-0.4*	0.03											Folpet and Phthalimide (separately)	No							Calculation of sum using conversion factor
94		No	Scope	1.27	*0.3*	0.03	10	deep frozen									Folpet and Phthalimide (separately)								Calculation of sum using conversion factor
95		Yes	Scope	1.61	*1.4*	0.01																			Calculation of sum using conversion factor
97		Yes	Scope	1.242	*0.2*	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, citrate buffer	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Captan-D_6	1	80 % | 2	slope of std. add. to sample portions	near the result	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
98	x	No	No	1.44	*0.8*	0.01	10	cold	Man. shaking, 1 min	ACN			Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, THPI	1		EUPT-blank		GC-MS/MS (QQQ)	GC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	1.31	*0.4*	0.02	10	deep frozen	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	1.07	*-0.4*	0.01	10	cold	Mech. shaking, 30 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank							GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Folpet (sum) (*Assigned value* = 1.195 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
103	x	Yes	Scope	1.11	*-0.3*	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	No			EUPT-blank	50 µg/kg	GC-MS/MS (QQQ)	EI-pos	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	No	1.26	*0.2*	0.01	10	cold	Mech. shaking, 20 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	No		92 % | 3	EUPT-blank		GC-(µ) ECD		QuEChERS – Citrate buffered (EN 15662)
105	x	Yes	Scope	1.11	*-0.3*	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration, Filtration through anhydrous sodium sulfate		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No			EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
106		No	No	1.00	*-0.7*	0.01	10	ambient	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
109		Yes	No	1.26	*0.2*	0.01	10	ambient	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Phthalimide	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	QQQ 7000C Agilent	QuEChERS – Citrate buffered (EN 15662)
113		No	Scope	1.21	*0.1*	0.01																			Calculation of sum using conversion factor
115		Yes	Scope	1.43	*0.8*	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, PCB-153	1	92 % | 3	EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		No	No	1.12	*-0.3*	0.03	10	slightly frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Other								GC-MS/MS (QQQ)	2 MRM; EI	QuEChERS – Citrate buffered (EN 15662); the sum was calculated from the values of Folpet and PI
125		No	No	1.023	*-0.6*	0.01	10	just thawed	Mech. shaking, 15 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Folpet and Phthalimide (separately)						GC-MS/MS (QQQ)	Cool On Column	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: 10 g sample + 10 ml EtAc + 8 g $MgSO_4$ + 1.5 g NaCl
126		No	No	0.960	*-0.8*	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No	GPC		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet	Yes, TPP	1	83.5 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		Yes	No	1.62	*1.4*	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet	Yes, Folpet-D_4	1		EUPT-blank		GC-MSD	Bruker 320 - Bruker 450GC	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: The laboratory employes this method like reference method for the detection mode (NCI)
129		Yes	No	1.97	*2.6*	0.01	15	deep frozen	Mech. shaking, 15 min	15 ml 1 % Hac in MeCN	$NaOAc/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	No		75 % | 4	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
130		Yes	Scope	0.960	*-0.8*	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	Centrifugation		Std. add. to extract ALIQUOTS		Folpet and Phthalimide (separately)	Yes, ILIS	2				GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

THPI (*Assigned value* = 0.110 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.099	*-0.4*	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to extract ALIQUOTS		THPI	No					GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.0946	*-0.6*	0.01	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, other IS	1	85.1 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
4		Yes	Scope	0.0874	*-0.8*	0.01	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, sodium hydrogen carbonate	GPC, Envirosep HPGPC column		Std. spiked to MATRIX Extract	other organic strawberry	THPI	Yes, trifluralin D_{14}	2	92 % | 1	other organic strawberry	0.02 mg/kg, org. strawberry	GC-MS/MS (QQQ)	3 MRM	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
7		Yes	Scope	0.083	*-1.0*	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer pH 5.5	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		Yes, Triphenylmethane	1				GC-TOF	EI	Quantification of Residues of Folpet and Captan in QuEChERS Extracts Version 3.1 (last update: 06.04.17)
9		Yes	No	0.0636	*-1.7*	0.01	10	deep frozen	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	No		141 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
14		Yes	No	0.125	*0.5*	0.02	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	THPI	Yes, Atrazine-D_5	1	107 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
17	x	No	No	0.0823	*-1.0*	0.02	10	slightly frozen	Mech. shaking, 2 min	ACN, EtOAc	None	No	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, Phenanthrene-D_{10}	2	88 % | 2	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: RP-SPE cleanup step
18		Yes	Scope	0.108	*-0.1*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan and THPI (separately)	Yes, but only to check Extr. efficiency	1		EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	0.131	*0.7*	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Liq.-Liq. Part., Dessication with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, Captan-D_6	1				GC-TOF		QuEChERS – Citrate buffered (EN 15662)
20		Yes	Commodity	0.119	*0.3*	0.001	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	Yes, 1×, addition of H_2SO_4, pH 1	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3	82 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	0.115	*0.2*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 2×, 1) Buffering; 2) FA	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS		THPI	Yes, ILIS	1	71 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.153	*1.5*	0.05	10				$NaOAc/MgSO_4$		Centrifugation					Yes, Parathion-D_6	2				GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
25		Yes	No	0.196	*3.1*	0.02	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, Bromophos methyl	1	92 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
26		No	No	0.062	*-1.8*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	THPI	Yes, Anthracene	1	100 % | 2	slope of std. add. to sample portions		GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662)
27		No		0.0738	*-1.3*	0.01	10	deep frozen	Ultra turrax, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
29	x	Yes	No	0.127	*0.6*	0.01	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)	EI	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789); THPI is screened for in routine at LOD = 0.01 mg/kg, not quantifiable, not accredited yet
33	x	Yes	Scope	0.093	*-0.6*	0.01	10	just thawed	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, HCB-D_6	1	91 % | 1	EUPT-blank	Multiple cali.	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

THPI (*Assigned value* = 0.110 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
34		Yes	No	0.283	*6.3*	0.01	10	ambient	Mech. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	lettuce		Yes, Antracene-D_{10}	1	80 % | 2	QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	0.119	*0.3*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	THPI	Yes, Captan-D_6	1		EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: centrifugation step at -5°C
39		Yes		0.158	*1.7*	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, bromophos	1	86 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: clean up
41		Yes	No	0.134	*0.9*	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)	Yes, TPP	1		other strawberry	other strawberry	GC-MS/MS (QQQ)		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	0.129	*0.7*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, Buffering	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)		Yes, Chlorpyrifos-D_{10}	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
46		Yes	No	0.104	*-0.2*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT, Rec. Factor		Captan and THPI (separately)	Yes, other IS	2	48 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
47		Yes	No	0.172	*2.2*	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	NaOAc/$MgSO_4$	No	Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME		Yes, TPP	2	82 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		Yes	Scope	0.0901	*-0.7*	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TDCPP	1	70 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.0561	*-2.0*	0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 %CH3COOH	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	No		70.7 % | 1	EUPT-blank		GC-NPD		QuEChERS – Citrate buffered (EN 15662); analysed by GC-NPD because of GC-MS/MS malfunction
50		Yes	No	0.092	*-0.7*	0.01	10	deep frozen	Mech. shaking, 30 min	EtOAc	None	No	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-28	2	104 % | >5	EUPT-blank		GC-MS/MS (QQQ)		in house method
51		Yes	No	0.128	*0.6*	0.01	10	deep frozen	Mech. shaking, 25 min	ACN, EtOAc/C_6H_{12} 1:9	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		70 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI pos	QuEChERS – Citrate buffered (EN 15662)
52		Yes	Commodity	0.101	*-0.3*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, TPP, but not IS corrected, recovery only	1	93 % | 2	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)	Addition of Analytical Protect. before measurement	QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.069	*-1.5*	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Phthalimide	Yes, PCB-31	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.093	*-0.6*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	No		95.2 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	No	0.231	*4.4*	0.01	10	slightly frozen	Man. shaking, 1 min	EtOAc	Other	No	Dispersive-SPE (other); $MgSO_4$/C18/PSA		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	Yes, TDCPP	1	112.8 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Not buffered, partitioning salt: Na_2SO_4 (10 g)
61		No	No	0.115	*0.2*	0.005	10	deep frozen	Man. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	No			EUPT-blank	rec. to check meth. performance	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
64		Yes	Scope	0.113	*0.1*	0.005	10	deep frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	2	86 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

THPI (*Assigned value* = 0.110 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
66	x	No	No	0.0628	*-1.7*	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, Aldrin	2	77 % | 2	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
70		No		0.064	*-1.7*	0.01	10	just thawed	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (other); PSA/C18/$MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Captan	Yes, TDCPP	1	62.4 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.0794	*-1.1*	0.01	15	ambient	Mech. shaking, 5 min	ACN	NaOAc/$MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, TPP	2		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
72		Yes	No	0.079	*-1.1*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None		Std. spiked to MATRIX Extract	organic lettuce/pepper	THPI	Yes, Chlorpyrifos-D_{10}	1	64 % | 2	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
73	x	No	No	0.105	*-0.2*	0.01	10	slightly frozen	Ultrasonic bath, 10 min	Acetone, CH_2Cl_2, petroleum ether	None	No			Std. spiked to MATRIX Extract	EUPT-Blank				85 % | 3	EUPT-blank		GC-MSD		Mini-Luke-Type (Acetone DCM-PE)
74		No	No	0.143	*1.2*	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, Parathion-D_{10}	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time
76		Yes	Scope	0.100	*-0.4*	0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	THPI	Yes, Captan-D_6	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
78		No	No	0.099	*-0.4*	0.02	10	deep frozen	Ultra turrax, 3 min	Acetone, C_6H_{12}/EtOAc 1:1	NaCl	No	GPC		Std. spiked to MATRIX Extract			No		93 % | 1	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		S-19 (§64 LFGB L00.00-334)
81	x	No	No	0.107	*-0.1*	0.01	10	deep frozen	Ultra turrax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract								GC-MS/MS (QQQ)	Thermo TSQ QUANTUM XLS Ultra	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
84		Yes	Commodity	0.105	*-0.2*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Captan and THPI (separately)	Yes, TPP	1	95 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.117	*0.2*	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	SPE-column (C18), Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract			Yes, Terbutryn-D_5	1	79 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.096	*-0.5*	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Chlorpyriphos-Me-D_6	1	89 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		No	No	0.097	*-0.5*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	Other Bank		No		89 % | 1	other organic strawberry	other org. strawberry, 0.010 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17); longer experience (more than 2 years) with another method
92		Yes	Commodity	0.150	*1.4*	0.01	10	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-Ion Trap	EI	QuEChERS – Citrate buffered (EN 15662)
94		No	Scope	0.107	*-0.1*	0.01	10	deep frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, 200 µl of 5 N NaOH	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	THPI	No					GC-MS/MS (QQQ)	2 µl inj.	QuEChERS – Citrate buffered (EN 15662)
95		Yes	Scope	0.137	*1.0*	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, ascorbic acid before GC	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS, Other	strawberry purée	THPI	No				still no validation data available	GC-MS/MS (QQQ)	analytical column: HP 5-MS	QuEChERS – Citrate buffered (EN 15662), Modification: at the end of procedure the extract is treated with ascorbic acid as analytical protectant instead of FA
97		Yes	Scope	0.101	*-0.3*	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, citrate buffer	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, Captan-D_6	1	92 % | 2	slope of std. add. to sample portions	near the result	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

THPI (*Assigned value* = 0.110 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
98	x	No	No	0.117	*0.2*	0.01	10	cold	Man. shaking, 1 min	ACN			Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, THPI-ILIS	1	117 % | 1	EUPT-blank		GC-MS/MS (QQQ)	GC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	0.112	*0.1*	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, TPP	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	0.170	*2.2*	0.01	10	cold	Mech. shaking, 30 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
103	x	Yes	Scope	0.123	*0.5*	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	None	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	No		92 % | 1	EUPT-blank	50 µg/kg	GC-MS/MS (QQQ)	EI-pos	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	No	0.131	*0.7*	0.01	10	cold	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	No		86 % | 3	EUPT-blank		GC-Ion Trap	EI	QuEChERS – Citrate buffered (EN 15662)
105	x	Yes	Scope	0.110	*0.0*	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration, Filtration through anhydrous sodium sulfate		Std. spiked to MATRIX Extract	EUPT-Blank	Captan	No			EUPT-blank		GC-MS/MS (QQQ)	captan (sum) - captan (parent) expressed as THPI	Mini-Luke-Type (Acetone DCM-PE)
106		No	No	0.300	*6.9*	0.01	10	ambient	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Captan and THPI (separately)	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
109		Yes	No	0.113	*0.1*	0.01	10	ambient	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	THPI	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	QQQ 7000C Agilent	QuEChERS – Citrate buffered (EN 15662)
113		No	Scope	0.110	*0.0*	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank		Yes, Desmetryn, Mirex	1	94 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Scope	0.047	*-2.3*	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, PCB-153	1	84 % | 3	EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		No	No	0.122	*0.4*	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. add. to extract ALIQUOTS		THPI	Yes, Captan-D_6	2	98 % | 1	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)	2 MRM; EI	QuEChERS – Citrate buffered (EN 15662)
125		No	No	0.056	*-2.0*	0.01	10	just thawed	Mech. shaking, 15 min	EtOAc	NaCl/$MgSO_4$	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	THPI						GC-MS/MS (QQQ)	Cool On Column	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: 10 g sample + 10 ml EtAc + 8 g $MgSO_4$ + 1.5 g NaCl
126		No	No	0.080	*-1.1*	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	NaCl/$MgSO_4$	No	GPC		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Captan	Yes, TPP	1	80.4 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		No	No	0.171	*2.2*	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	Yes, TPP	1	90 % | 1	EUPT-blank		GC-MS/MS (QQQ)	Agilent 7000C - Agilent 7890B	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: The laboratory employes this method like reference method for the extraction and detection
129		Yes	No	0.220	*4.0*	0.01	15	deep frozen	Mech. shaking, 15 min	15 ml 1 % Hac in MeCN	NaOAc/$MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	THPI	No		72 % | 4	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
130		Yes	Scope	0.101	*-0.3*	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	Centrifugation		Std. add. to extract ALIQUOTS		Captan and THPI (separately)	Yes, ILIS	2				GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
3rd-132		No	No	0.710	*21.7*	0.01	10	cold	Mech. shaking, 10 min	ACN, Hexane:Acetone = 1:1	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to Pure SOLVENT: Hexane : Acetone = 1:1	None (pure Water/Solvent)	THPI	Yes, PCB-31	2	63 % | 2	slope of std. add. to sample portions		GC-MSD		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Phthalimide (*Assigned value* = 0.446 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
1		Yes	Scope	0.382	*-0.6*	0.005	10	deep frozen	Mech. shaking, 20 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to extract ALIQUOTS		Phthalimide	No					GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Extr. with EtOAc
2		Yes	Scope	0.382	*-0.6*	0.02	10	deep frozen	Man. shaking, 5 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract, Rec. Factor	Mix of different fruits and vegetables		Yes, other IS	1	95.1 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
4		Yes	Scope	0.454	*0.1*	0.01	10	deep frozen	Ultra turrax, 2 min	EtOAc	None	Yes, 1×, sodium hydrogen carbonate	GPC, Envirosep HPGPC column		Std. spiked to MATRIX Extract	other organic strawberry	Phthalimide	Yes, trifluralin D_{14}	2	100 % | 1	other organic strawberry	0.02 mg/kg, org. strawberry	GC-MS/MS (QQQ)	3 MRM	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
7		Yes	Scope	0.341	*-0.9*	0.01	10	cold	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer pH 5.5	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	Test Item (std. add. approach)		Yes, Chlorpyrifos-D_{10}	1				GC-TOF	EI	Quantification of Residues of Folpet and Captan in QuEChERS Extracts Version 3.1 (last update: 06.04.17)
13	x	Yes	No	0.813	*3.3*	0.02	18	deep frozen	Ultra turrax, 3 min	EtOAc, 100 ml	None	No	Centrifugation, GPC, 5 min at 4000rpm		Std. spiked to MATRIX Extract, 5 points	EUPT-Blank	Folpet and Phthalimide (separately)	No		66.5 % |			GC-(μ) ECD	Agilent 6890	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
14		Yes	No	0.441	*0.0*	0.05	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Phthalimide	Yes, Atrazine-D_5	1	108 % | 1	EUPT-blank		LC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
17	x	No	No	0.441	*0.0*	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN, EtOAc	None	No	SEP-Column (DEA)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, Phenanthrene-D_{10}	2	96 % | 2	EUPT-blank		GC-MSD		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered), Modification: RP-SPE cleanup step
18		Yes	Scope	0.433	*-0.1*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Folpet and Phthalimide (separately)	Yes, but only to check Extr. efficiency	1		EUPT-blank		GC-MSD		QuEChERS – Citrate buffered (EN 15662)
19	x	Yes	Scope	0.558	*1.0*	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Liq.-Liq. Part., Dessication with $MgSO_4$		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, Folpet-D_4	1				GC-TOF		QuEChERS – Citrate buffered (EN 15662)
20		Yes	Scope	0.397	*-0.4*	0.003	10	deep frozen	Man. shaking, 3 min	ACN	$NaCl/MgSO_4$	Yes, 1×, addition of H_2SO_4, pH 1	None		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	3	94 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
21		Yes	Scope	0.470	*0.2*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	Yes, 2×, 1) Buffering; 2) FA	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS		Phthalimide	Yes, ILIS	1	80 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
22		Yes	Scope	0.488	*0.4*	0.02	10											Yes, Parathion-D_6	2				GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
25		Yes	No	0.637	*1.7*	0.02	10	slightly frozen	Mech. shaking, 1 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, Bromophos methyl	1	101 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
26		No	No	0.550	*0.9*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	$NaCl/MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Phthalimide	Yes, Anthracene	1	100 % | 2	slope of std. add. to sample portions		GC-Ion Trap		QuEChERS – Citrate buffered (EN 15662)
29	x	Yes	No	0.497	*0.5*	0.01	10	slightly frozen	Mech. shaking, 3 min	EtOAc		Yes, 1×, Addition of $NaHCO_3$ according to method	Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)	EI	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789); Quantified using GC-MS/MS (not accredited yet, LOD = 0.01 mg/kg), Phtalimide is screened for in routine at LOD = 0.01 mg/kg, not quantifiable, not accredited yet,

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Phthalimide (*Assigned value* = 0.446 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
31		No	No	0.516	*0.6*	0.01	10	just thawed	Mech. shaking, 2 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)				82 % | 2			GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
33	x	Yes	Scope	0.386	*-0.5*	0.01	10	just thawed	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, HCB-D_6	1	99 % | 1	EUPT-blank	Multiple cali.	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)
34		Yes	No	0.602	*1.4*	0.01	10	ambient	Mech. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	lettuce		Yes, Antracene-D_{10}	1	80 % | 2	QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
35	x	No	No	0.437	*-0.1*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Phthalimide	Yes, Folpet-D_4	1		EUPT-blank		GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: centrifugation step at -5°C
39		Yes		1.50	*9.5*	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, 1 % H_2SO_4	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, bromophos	1	92 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12)), Modification: clean up
41		No	No	0.260	*-1.7*	0.01	10	ambient	Ultra turrax, 1 min	MeOH, CH_2Cl_2	NaCl	No	PSA		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP	1		other strawberry	other strawberry	GC-MSD		Klein, Alder, J. AOAC 86/1015/2003 (ChemElut mth), Modification: PSA
42		Yes	Scope	0.403	*-0.4*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, Buffering	Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)		Yes, Chlorpyrifos-D_{10}	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
46		Yes	No	0.390	*-0.5*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to Pure SOLVENT, Rec. Factor		Folpet and Phthalimide (separately)	Yes, other IS	2	48 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
47		Yes	No	FN	*-3.9*	0.01	5	deep frozen	Mech. shaking, 5 min	ACN, HOAc	NaOAc/$MgSO_4$	No	Centrifugation		Std. spiked to MATRIX Extract	vegetables/ fruit ME		Yes, TPP	2	98 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: 0.5 % acid
48		Yes	Scope	0.505	*0.5*	0.01	10	slightly frozen	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TDCPP	1	116 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
49	x	Yes	Scope	0.288	*-1.4*	0.01	10	cold	Man. shaking, 2 min	ACN, ACN+1 % HOAc	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Filtration, filtration with syringe filters		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	No		96.8 % | 1	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662); analysed by GC-ECD because of GC-MS/MS malfunction
50		Yes	No	0.425	*-0.2*	0.01	10	deep frozen	Mech. shaking, 30 min	EtOAc	None	No	Dessication with Na_2SO_4		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, PCB-28	2	109 % | >5	EUPT-blank		GC-MS/MS (QQQ)		in house method
51		Yes	No	0.455	*0.1*	0.01	10	deep frozen	Mech. shaking, 25 min	ACN, EtOAc/C_6H_{12} 1:9	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		No		122 % | 1	EUPT-blank		GC-MS/MS (QQQ)	EI pos	QuEChERS – Citrate buffered (EN 15662)
52		Yes	Commodity	0.436	*-0.1*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Liq.-Liq.-Part.		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, TPP, but not IS corrected, recovery only	1	98 % | 1	EUPT-blank	0.5 mg/kg	GC-MS/MS (QQQ)	Addition of Analytical Protect. before measurement	QuEChERS – Citrate buffered (EN 15662)
53		Yes	Scope	0.399	*-0.4*	0.01	5	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank		Yes, PCB-31	1	100 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
57		No	No	0.414	*-0.3*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	No		85.7 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
58		Yes	No	0.911	*4.2*	0.01	10	slightly frozen	Man. shaking, 1 min	EtOAc	Other	No	Dispersive-SPE (other); $MgSO_4$/C18/PSA		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	Yes, TDCPP	1	89.2 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01), Modification: Not buffered, partitioning salt: Na_2SO_4 (10 g)
61		No	No	0.470	*0.2*	0.005	10	deep frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	No			EUPT-blank	rec. to check meth. performance	GC-MS/MS (QQQ)	EI	QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Phthalimide (*Assigned value* = 0.446 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
64		Yes	Scope	0.416	*-0.3*	0.005	10	deep frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, TPP	2	86 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
66	x	No	No	0.444	*0.0*	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Phthalimide	Yes, Aldrin	2	77 % | 2	EUPT-blank		GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
70		No		0.310	*-1.2*	0.01	10	just thawed	Man. shaking, 5 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (other); PSA/C18/$MgSO_4$		Std. spiked to MATRIX Extract, Rec. Factor		Folpet	Yes, TDCPP	1	161.5 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
71		Yes	No	0.412	*-0.3*	0.01	15	ambient	Mech. shaking, 5 min	ACN	NaOAc/$MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, TPP	2		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
72		Yes	No	0.374	*-0.6*	0.01	10	deep frozen	Mech. shaking, 10 min	ACN +1 % H_2SO_4 (e.g. dithianon QuEChERS)	NaCl	No	None		Std. spiked to MATRIX Extract	organic lettuce/pepper	Phthalimide	Yes, Chlorpyrifos-D_{10}	1	79 % | 2	EUPT-blank	0.1 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % H_2SO_4 in ACN (e.g. EURL-SRM Mth for Dithianon (SRM-12))
73	x	No	No	0.389	*-0.5*	0.01	10	slightly frozen	Ultrasonic bath, 10 min	Acetone, CH_2Cl_2, petroleum ether	None	No			Std. spiked to MATRIX Extract	EUPT-Blank				90 % | 3	EUPT-blank		GC-(μ) ECD		Mini-Luke-Type (Acetone DCM-PE)
74		No	No	0.561	*1.0*	0.05	10	slightly frozen	Mech. shaking, 20 min	EtOAc	None	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, Parathion-d10	1	107 % | 1	EUPT-blank		GC-MS/MS (QQQ)		SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: Extr. time
76		Yes	Scope	0.440	*-0.1*	0.01	10	cold	Mech. shaking, 10 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Phthalimide	Yes, PCB-31	1		QC validation data		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
78		No	No	0.412	*-0.3*	0.01	10	deep frozen	Ultra turrax, 3 min	Acetone, C_6H_{12}, EtOAc, C_6H_{12}/EtOAc 1:1	NaCl	No	GPC		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	No		93.3 % | 1	EUPT-blank	0.5 mg/kg	GC-MS/MS (QQQ)		S-19 (§64 LFGB L00.00-334)
81	x	No	No	0.518	*0.6*	0.01	10	deep frozen	Ultra turrax, 1 min	EtOAc, Na_2SO_4	Other	Yes, 1×, $NaHCO_3$	Centrifugation, Filtration		Std. spiked to MATRIX Extract								GC-MS/MS (QQQ)	Thermo TSQ QUANTUM XLS Ultra	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789)
84		Yes	Commodity	0.410	*-0.3*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/GCB/$MgSO_4$)		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP	1	95 % | 3	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
86		Yes	Scope	0.231	*-1.9*	0.01	10	deep frozen	Mech. shaking, 45 min	ACN, H_2O	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, pH 4 buffer was used	SPE-column (C18), Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract		Phthalimide	Yes, Phtalimide	1	110 % | 2	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
88		Yes	No	0.482	*0.3*	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, Lindane-D_6	1	93 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
90		Yes	No	0.352	*-0.8*	0.01	10	deep frozen	Mech. shaking, 15 min	ACN + 1 % FA (A-QuECHERS)	NaCl/$MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	Other Bank		No		92 % | 1	other blank	0.010 mg/kg	GC-MS/MS (QQQ)		QuEChERS – Acidif. w. 1 % FA in ACN (A-QuEChERS; e.g. EURL-SRM Mth/Observ. SRM-2, 16, 17); longer experience (more than 2 years) with another method
92		Yes	Commodity	0.349	*-0.9*	0.01	10	deep frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation, Filtration		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)		No					GC-(μ) ECD		QuEChERS – Citrate buffered (EN 15662)
94		No	Scope	0.457	*0.1*	0.01	10	deep frozen	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, 200 µl of 5 N NaOH	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Phthalimide	No					GC-MS/MS (QQQ)	2 µl inj.	QuEChERS – Citrate buffered (EN 15662)
95		Yes	Scope	0.425	*-0.2*	0.01	10	slightly frozen	Man. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, ascorbic acid before GC	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS, Other	strawberry purée	Phthalimide	No				still no validation data available	GC-MS/MS (QQQ)	analytical column: HP 5-MS	QuEChERS – Citrate buffered (EN 15662), Modification: at the end of procedure the extract is treated with ascorbic acid as analytical protectant instead of FA
97		Yes	Scope	0.406	*-0.4*	0.01	5	cold	Mech. shaking, 20 min	H_2O, ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, citrate buffer	Freezing out, Dessication with $MgSO_4$, Centrifuge with cooling/freezing function		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, Captan-D_6	1	94 % | 2	slope of std. add. to sample portions	near the result	GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract

Supplement-1: Methods used by the participating laboratories (ordered by Lab-Codes)

Phthalimide (*Assigned value* = 0.446 mg/kg*)

LabCode SRM12-	NRL	Routine	Accredited ‡	Reported Result [mg/kg]	z-score*	Reporting Limit [mg/kg]	Sample Weight [g]	Initial Sample Temperature#	Extr. Approach	Extr. and/or Partitioning solvent	Partition Salt Used	pH Modified	Cleanup		Calibration approach	Matrix used for calibration	Compound Used for Calibration	ISTD Used? 1)	IS was added 2)	Recovery Rate [%] | Recovery Replicates considered	Recovery Obtained from	Recovery Details	Determination Technique	Determination Details	Method details / Comments
98	x	No	No	0.645	*1.8*	0.01	10	cold	Man. shaking, 1 min	ACN			Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		Yes, THPI	1	76 % | 1	EUPT-blank		GC-MS/MS (QQQ)	GC-MS/MS	QuEChERS – Citrate buffered (EN 15662)
99		Yes	Commodity	0.465	*0.2*	0.01	10	deep frozen	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, TPP	1				GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
102		Yes	Scope	0.44	*-0.1*	0.01	10	cold	Mech. shaking, 30 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank		No					GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662)
103	x	Yes	Scope	0.506	*0.5*	0.01	15	just thawed	Ultra turrax, 1 min	Acetone, CH_2Cl_2, Petroleumether	Other	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	No		92 % | 1	EUPT-blank	50 µg/kg	GC-MS/MS (QQQ)	EI-pos	Mini-Luke-Type (Acetone DCM-PE)
104		Yes	No	0.468	*0.2*	0.01	10	cold	Mech. shaking, 20 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×	Centrifugation, Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	No		99 % | 3	EUPT-blank		GC-(µ) ECD		QuEChERS – Citrate buffered (EN 15662)
105	x	Yes	Scope	0.330	*-1.0*	0.02	15	slightly frozen	Ultra turrax, 1 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration, Filtration through anhydrous sodium sulfate		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet	No			EUPT-blank		GC-MS/MS (QQQ)	folpet(sum) - folpet (parent) expr. as phtalim	Mini-Luke-Type (Acetone DCM-PE)
106		No	No	1.00	*5.0*	0.01	10	ambient	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	None		Std. spiked to MATRIX Extract	EUPT-Blank	Folpet and Phthalimide (separately)	Yes, TPP	1		EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: no clean up
109		Yes	No	0.451	*0.0*	0.01	10	ambient	Mech. shaking, 1 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	Yes, 1×, Citrate Buffer mix	None		Procedural calibr. (Corr. for Recov.)	EUPT-Blank	Phthalimide	Yes, Antor	2	100 % | 3	EUPT-blank	0.01 , 0.05 and 0.15 mg/kg	GC-MS/MS (QQQ)	QQQ 7000C Agilent	QuEChERS – Citrate buffered (EN 15662)
113		No	Scope	0.460	*0.1*	0.01	10	slightly frozen	Mech. shaking, 15 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/$MgSO_4$)		Std. add. to extract ALIQUOTS	EUPT-Blank		Yes, Desmetryn, Mirex	1	94 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Original Version (J. AOAC 86, 2003) (not buffered)
115		Yes	Scope	0.500	*0.5*	0.01	15	just thawed	Mech. shaking, 2 min	Acetone, CH_2Cl_2, petroleum ether	None	No	Centrifugation, Filtration		Std. spiked to MATRIX Extract, Rec. Factor	apple		Yes, PCB-153	1	85 % | 3	EUPT-blank		GC-MS/MS (QQQ)		Mini-Luke-Type (Acetone DCM-PE)
116		No	No	0.431	*-0.1*	0.01	10	slightly frozen	Mech. shaking, 3 min	ACN	NaCl/$MgSO_4$/Citrate-Buffer mix	No	Dispersive-SPE (PSA/$MgSO_4$), Filtration		Std. add. to extract ALIQUOTS		Phthalimide	Yes, Folpet-D_4	2	99 % | 1	EUPT-blank	0.4 mg/kg	GC-MS/MS (QQQ)	2 MRM; EI	QuEChERS – Citrate buffered (EN 15662)
125		No	No	0.248	*-1.8*	0.01	10	just thawed	Mech. shaking, 15 min	EtOAc	$NaCl/MgSO_4$	No	None		Std. add. to sample PORTIONS (Corr. for Recov.)	Test Item (std. add. approach)	Phthalimide						GC-MS/MS (QQQ)	Cool On Column	SweEt type (e.g. T. Pihlström et al. Anal. Bioanal. Chem (2007) 389, 1773-1789), Modification: 10 g sample + 10 ml EtAc + 8 g $MgSO_4$ + 1.5 g NaCl
126		No	No	0.330	*-1.0*	0.01	5	just thawed	Mech. shaking, 30 min	H_2O, ACN	$NaCl/MgSO_4$	No	GPC		Std. spiked to Pure SOLVENT	None (pure Water/Solvent)	Phthalimide	Yes, TPP	1	71.8 % | 1	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Citrate buffered (EN 15662), Modification: For example sample weigth, method is equivalent to EN 15662
127		No	No	0.612	*1.5*	0.01	10	slightly frozen	Mech. shaking, 2 min	ACN	Other	No	Dispersive-SPE (PSA/$MgSO_4$)		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	Yes, TPP	1	90 % | 1	EUPT-blank		GC-MS/MS (QQQ)	Agilent 7000C - Agilent 7890B	Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07, Modification: The laboratory employes this method like reference method for the extraction and detection
129		Yes	No	0.851	*3.6*	0.01	15	deep frozen	Mech. shaking, 15 min	15 ml 1 % Hac in MeCN	$NaOAc/MgSO_4$	No	Dispersive-SPE (PSA/$MgSO_4$), Centrifugation		Std. spiked to MATRIX Extract	EUPT-Blank	Phthalimide	No		73 % | 4	EUPT-blank		GC-MS/MS (QQQ)		QuEChERS – Acetate buffered (AOAC Official Method 2007.01)
130		Yes	Scope	0.285	*-1.4*	0.01	10	slightly frozen	Mech. shaking, 1 min	ACN + 1 % FA (A-QuECHERS)	$NaCl/MgSO_4$	No	Centrifugation		Std. add. to extract ALIQUOTS		Folpet and Phthalimide (separately)	Yes, ILIS	2				GC-MS/MS (QQQ)		Captan/Folpet/THPI/Phthalimide: Analysis via GC-MS(/MS) using ILIS - SRM07
3rd-132		No	No	1.56	*10.0*	0.01	10	cold	Mech. shaking, 10 min	ACN, Hexane:Acetone = 1:1	NaCl/$MgSO_4$/Citrate-Buffer mix		Dispersive-SPE (PSA/GCB/$MgSO_4$)		Std. spiked to Pure SOLVENT: Hexane : Acetone = 1:1	None (pure Water/Solvent)	Phthalimide	Yes, PCB-31	2	66 % | 2	slope of std. add. to sample portions		GC-MSD		QuEChERS – Citrate buffered (EN 15662)

Abb. of solvent: ACN: acetonitrile; C_6H_{12}: cyclohexane; CH_2Cl_2: dichlormethan; formic acid: FA; ethyl acetate: EtOAc; HOAc: acetic acid; MeOH: methanol

* The assigned value and z-scores were calculated for informative purpuse only.

deep frozen (e.g. -18 °C), slightly frozen (e.g. -8 °C – -3 °C), just thawed (e.g. 0 °C – 3 °C), cold (e.g. 4 °C – 10 °C), cold (e.g. 4 °C – 10 °C)

‡ Scope: Yes, via flexible scope; commodity : Yes, for this commodity type

1) IS: internal standard; ILIS : isotopically labelled internal standard

2) 1: at the beginning of procedure; 2: to an aliquot of the final extract; 3: to an aliquot of the final extract