Survey on EUPT-SRM14

Residues of Pesticides Requiring Single Residue Methods

Test Item: Bovine Liver Homogenate

Survey from 10 to 29 May, 2019

June 2019

Approved by Michelangelo Annastassiades (Head of EURL-SRM), Stuttgart, 12.06.2019

Q1: HOW SATISFIED ARE YOU WITH THE EUPT-SRM14?

Q1-1: PT Organisation (PT announcement and assistance before, during and after PT)

		Answer	Ratio
5		21	45 %
4		23	49 %
4 + 5		44	94 %
3		3	6 %
2		0	0 %
1		0	0 %
Not Applicable		0	–
No Answer		0	–
Average Rating		4.4	

Positive comments:

- reliable assistence when something happens.

Negative comments and suggestions for improvement:

1. the change of matrix at the last “minute”.
2. It was not the common matrix we have the methods validated for.
3. sometimes very last changes during test or very short before delivering
4. The postponement of the deadline for result submission is annoying! It would make more sense to give the participants more time from the beginning instead of changing during the PT every year.
5. We suggest not to do the test at the same time that the EUPT-AO.
6. Some of the pesticides of the target list were very expensive to buy them.

Reply by organisers:

1. We are sorry if this change of matrix has caused stress to you and your lab. The initial intention was indeed to organize a PT on cabbage (same commodity as EUPT-FV), and this was also announced at the end of September 2018 at the joint workshop. Towards the end of October 2018, however, the COM urgently requested to switch to liver and to conduct the PT preferably within 2018 but not later than the first quarter of 2019. It was also a big challenge for us to organise and prepare this uncommon material as well as to release the validated methods for the analysis the SRM pesticides in animal liver.
2. Please see 1.
3. We’ll avoid short-term change.
4. This time, the were two main reasons for the extention: a) Several laboratories reported that data entered into the system were not tracked in the system or at least not visible in the Excel export. The shift of the deadline gave the programmers in Denmark enough time to examine the situation and would minimize the risk of missing information and laborious data collection afterwards; b) Some laboratories asked for a deadline shift to account for delays in the delivery of certain consumables (e.g. standards, filters).

5. We always try to organize the EUPTs successively rather than in parallel and to keep overlaps as short as possible. The stiff timeline given by the COM (also applying to the EURL-AO) did not give us much freedom this regarding in the particular case.
6. Indeed, the current PT included many liver-relevant metabolites, for which the standards were difficult to find and/or expensive to purchase. In order to assist the laboratories we have published a list with possible sources of analytical standards. Liver-relevant compounds that were not available or too difficult to analyze were excluded from the target pesticides list. In any case, with exception of glyphosate all other compounds were only optional.

Q1-2: Registration Page (via EURL-DataPool)

		Answer	Ratio
5		22	48 %
4		19	41 %
4 + 5		41	89 %
3		5	11 %
2		0	0 %
1		0	0 %
Not Applicable		1	–
No Answer		0	–
Average Rating		4.4	

Positive comments:

- It was fast and flexible. The common password of different PTs is a good idea.
- Quick and easy

Negative comments and suggestions for improvement:

1. Too much details to fill out regarding the national monitoring programme

Reply by organisers:

1. The information on the national monitoring programme gives a hint on the scope of laboratories and their significance within the monitoring programs.

Q1-3: Information and instructions provided by the organisers

		Answer	Ratio
5		25	53 %
4		16	34 %
4 + 5		41	87 %
3		6	13 %
2		0	0 %
1		0	0 %
Not Applicable		0	–
No Answer		0	–
Average Rating		4.4	

Positive comments:

- The excel file with additional information on the compounds was very useful

Negative comments and suggestions for improvement:

1. I missed the information about glyphosate being a compulsory compound: Where/when was it announced? I discovered it in the preliminary report... Fortunately, we analyzed it (because it was obvious as regards the MACP).
2. Information about EDTA came rather late.
3. Because we did not have the method until a couple of weeks before the sample arrived, this was not really a PT. It was more like a ring trial than a PT and required an inordinate percentage of laboratory resources.

Reply by organisers:

1. Traditionally, compounds belonging to the MACP are assigned as mandatory. In this EUPT the only compulsory compound was glyphosate. Within the Target Pesticides List (TPL) glyphosate was highlighted by colour, but it was indeed not explicitly named as compulsory. On the result submission page, glyphosate was marked as mandatory under "scope". In any case as there is no Category A/B classification within the EUPT.
2. The supplementary information on the availability of EDTA-salts resulted after receiving the information by the PT-participant that the product referred to in the QuPPe protocol was out of stock. We have thereafter swiftly searched for an adequate substitution and communicated this information to all participants.
3. As explained under Q1-1 the use of bovine liver as matrix for the EUPT-SRM14 was a request by the COM. Most laboratories didn't have validated methods for the SRM pesticides. But we hope, that our information was useful and helpful for participating laboratories to establish the analytical methods for liver as this is only in line with the COM wish to see advancements in the analyte scope of laboratories participating in the monitoring of liver (which is now included in the MACP) and other commodities of animal origin.

Q1-4: Shipment/Delivery

		Answer	Ratio
5		34	72 %
4		10	21 %
4 + 5		44	94 %
3	★	2	4 %
2		0	0 %
1	★	1	2 %
Not Applicable		0	–
No Answer		0	–
Average Rating		4.6	

Positive comments:

- Conditions when received were excellent with much dry ice left in the box.

Negative comments and suggestions for improvement:

1. ★ It took a week for the sample to arrive.

Reply by organisers:

1. ★ We are sorry for the delay in receiving the PT materials. The delay was due to customs clearance procedures of a non-EU country, that took longer than expected and which we could not influence. We have attached the contact data of the recipient (including phone number) on the parcel exterior and, at the request of the participant, we have even additionally enclosed a sanitary certificate for the sample. Nevertheless, this still didn't help to speed up customs procedures. As shipment with dry ice was not allowed in this route, we have taken additional measures to delay the heating up of the sample. So, the sample was frozen at -80 °C, packed into a special thermo-insulated Dewar container and packed into a box with additional insulation and cooling elements. Furthermore, a message was attached on the exterior of the parcel, highlighting that it has to be kept in the freezer in case of delays. The participant was asked to get into touch with the customs and DHL to avoid that the package remains at the customs during the weekend, but this attempt was obviously not successful.
2. ★ This is a comment concerns the shipment to a participant giving a score of 3 but without additional comments: In this case the delay was due to a rare combination of circumstances within DHL and outside of our sphere of influence. Through the online tracking tool we (EURL-SRM) realized the unexpected holding of delivery and contacted DHL to find a solution. At the same time we informed the participant about the delay and took measure that the participant receives a second parcel. The delivery of the 2nd parcel was accomplished within 24 hours.

GENERAL APPEAL: Participant are prompted to contact the organizers when the package does not arrive within the expected duration. They are also prompted to follow the whereabouts of their parcels via the online tracking tool. Once the package has arrived the destination country, the local DHL offices need to be contacted when it comes to problems and delays. Participants in countries outside the EU are urged to stay in contact with local customs and the local DHL office to ensure a smooth and speedy clearance and delivery.

Q1-5: Test Item

		Answer	Ratio
5		34	72 %
4		11	23 %
4 + 5		45	96 %
3		2	4 %
2		0	0 %
1		0	0 %
Not Applicable		0	–
No Answer		0	–
Average Rating		4.7	

Positive comments:

- like powder, very well homogenized

General comments by participants to Test Item:

- We never did liver before regarding most of the analytes. Due to short term notice, not much experience could be gathered.

Q1-6: Blank Material

		Answer	Ratio
5		33	70 %
4		10	21 %
4 + 5		43	91 %
3		3	6 %
2		1	2 %
1		0	0 %
Not Applicable		0	–
No Answer		0	–
Average Rating		4.6	

Positive comments:

- very well homogenized

Negative comments and suggestions for improvement:

1. The blank sample seemed not to be homogenized properly (like without dry ice)
2. In the preparation it did not behave the same as the test item.

Reply by organisers:

1. Following initial homogenization, the spiked material was divided in large portions and cryo-milled using dry ice. Afterwards, the material obtained a snow-like consistency which was maintained until the participants received the samples. This snow-like consistency facilitates weighing of analytical portions obviating the need for re-milling or thawing, which can negatively affect labile analytes. As the second cryo-milling with dry ice was time consuming, and as it was considered not essential in the absence of analytes, it was skipped in the case of the blank material.
2. Please see 1.

Q1-7: The new Results Submission Webtool

		Answer	Ratio
5		7	16 %
4		13	29 %
4 + 5		20	44 %
3		18	40 %
2		5	11 %
1		2	4 %
Not Applicable		2	–
No Answer		0	–
Average Rating		3.4	

Positive comments:

- Very good
- convenient after a acclimatization
- Almost perfect. Except for some communication problems/failure it is well usable. Quick result submission.
- Encountered error messages initially after installing & trying to use Google Chrome to access the website for all the EUPT rounds this was resolved.
- Through the tab function to separate out scope, detected, edit results, edit methods & additional information was easy to navigate.
- The support service was good and responded quickly.

Negative comments and suggestions for improvement:

1. There were many issues with the new webtool and we would accept that these were teething problems with the introduction of a completely new system.
2. It would be great, if header and first column with analytes would be fixed and within the window at any time.
3. It is very complicate to have a new user and new password for each PT.
4. The copy row data to other rows function did not seem to work within the page(s). (3×)
5. Many problems with entering method information
6. Compounds ticked in “Detected” selection did not appear correctly in the “Edit results” section. I had to check for quite a few times, whether everything is correctly transferred.
7. If you initially Select “positive in blank”, then the blank value Field in the Next window becomes mandatory. If you go back and deselect “positive in blank” then the value Field is still mandatory, even if you are not able to enter any values in it (greyed out). Then the only way to submit is to fill out a value for the blank, even if you don’t have any finding.
8. That we could not use Internet Explorer was a problem, because I could not use my own computer to fill in the results on the web tool. I had to switch the computer.
9. Problems with Excel-Export: Incorrect results in excel sheet after submission of results
10. information entered on webtool is not available afterwards in the downloadable Excel sheet with results.)

11. All the info that the lab has to collect during the analysis should be available beforehand (we would like to know whether we have to record temperatures, shaking times etc.)
12. We missed a button "Save as Draft" / "Time out" happens to the results submission pages. You become unsure if you will lose your data when refreshing the page.
13. We were informed twice, that our laboratory has obtained false negative results, which later turned out to be wrong (2×).
14. A little bit more complicated than before / Webtool is not easy to use.
15. Slow due to saving step after each enter

Reply by organisers:

As one participant pointed out there are quite a few "teething problems" with the new webtool, and we are working on them:

2. The header and the pesticide name will be fixed next time.
3. Login credential: **The login credential is <u>personal</u> and <u>unique to your email address</u>**. If you use two different email addresses for two different PTs, you will get two different login credentials for the two PTs and has to use the correct one for the corresponding PT.
   If you want to use only one login credential for all PTs you are involved, be aware of using the same email address during the PT registration.
4. The functionality of the webtool was mainly checked and corrected in the pre-production version. Obviously some errors have occurred during transferring to the real webtool for the participants so that the attributes "analysed", "detected" were not correctly linked to results, which resulted in the copy-function not working correctly. In future, the real webtool will be also be included in the checking.
5. Please see 3.
6. Please see 3.
7. Please see 3.
8. Due to limited resource (men power and financial), we can only support the two most commonly used browser Chrom and Firefox.
9. Due to some errors in the access permission policies within the software we, the PT organizers, were not able to download the complete data-sets. As this error only concerned very few laboratories it was not noticed and resulted in "transcription" errors within the preliminary report. An updates report had to be issued. The problem has localized and been fixed by the programers, and we hope that it will not happen next time.
10. We will prepare a new excel template to cover all data and information you reported on the webtool.
11. All columns and information asked on the method page were public in the guideline for submission which was usually provided to all participants before the PT.
12. "save" button: Your data are automatically saved once your mouse moves from one raw to the other. There is no need to have a "save as draft" button. And even you get time out, the data are saved. If you get time out, you should receive a popup news and can refresh your page. Re-login is not necessary.
13. Our program developer has fixed the error that resulted in the false information about "false negatives". The automatic message was embedded in a workflow, once initiated it can only be hardly stopped, thus most of you have received the false information about "false negatives" twice. The same error should not be occur again.

There were indeed several issues with the new data submission webtool, but we expect that these will be solved and that the new software will run smoothly in the next PTs. The new webtool has several good possibilities and will be of great help to all parties in the future. In any case we would like to express our apologies for any stress these issues may have caused to the participants.

Q2: Was the matrix used in EUPT-SRM14 (bovine liver) relevant for your routine work?

		Answer	Ratio
Yes		19	40 %
No		26	55 %
No Opinion		2	4 %
No Answer		0	–

The organizers would like to point out, that bovine liver was included in the multiannual control program (please see COMMISSION IMPLEMENTING REGULATION (EU) 2019/533).

Q3: According to your opinion, were the compound concentrations in the test item adequate for accessing the analytical proficiency of your laboratory?

General comments by participants to the assigned values:

- The assigned values for all of the compounds were too high. Such high concentration probably won´t be in an actual living animal, however for first evaluation of method performance, it was quite alright.
- It's difficult to say because this is not a matrix we normally analyse. The main issues were that a lot of these compounds were not previously on our screen so we were analysing them for the first time. Most of them worked out OK but although we did look for fenpropimorph carboxylic acid we didn't report a result because the comparison between replicate quantitation values was very inconsistent. The reason for this is almost certainly because this compound sticks to the GPC column used for clean up.

Q3-1: Glyphosate (AV = 0.534 mg/kg)

		Answer	Ratio
Appropiate		**30**	**88 %**
Too High		**4**	**12 %**
Too Low		**0**	**0 %**
No Answer		**13**	–

Comments on AV of Glyphosate:

- (too high): appropriate at 0.1 – 0.2 mg/kg level.
- (too high): around mrl.
- (too high): about 0.2 – 0.4 mg/kg as the maximum residue level is 0.2 mg/kg

Reply by organisers:

Indeed, the spiking level of glyphosate was too high compared to the current MRL of 0.2 mg/kg. When spiking we took into account the new MRL-proposal by EFSA (EFSA Journal 2018;16(5):5263), where an MRL of 0.7 mg/kg is proposed for glyphosate (sum) in bovine liver; as well as the high MRRL of 0.1 mg/kg (reflecting the analytical difficulties with the analysis of glyphosate in liver) and the need to have a good distance between MRRL and assigned value in order to avoid a cut in the population of results.

Q3-2: 2,4-DB (AV = 0.061 mg/kg)

		Answer	Ratio
Appropiate		28	90 %
Too High		1	3 %
Too Low		2	6 %
No Answer		16	–

Q3-3: Avermectin B1a (AV = 0.057 mg/kg)

		Answer	Ratio
Appropiate		25	86 %
Too High		1	3 %
Too Low		3	10 %
No Answer		18	–

Comments on AV of Avermectin B1a

- (too low): Abamectin > 0.1 mg/kg, because of difficulties with the sensitivity and recovery for those compounds.
- (too low): > 200 µg/kg
- (too low): 0.1 – 0.5

Reply by organisers:

We acknowledge the sensitivity issues with the analysis of abamectin, but as the MRL is at 0.02 mg/kg going higher wouldn't be appropriate.

Q3-4: Bixafen metabolite, desmethyl bixafen (AV = 0.050 mg/kg)

		Answer	Ratio
Appropiate		14	93 %
Too High		1	7 %
Too Low		0	0 %
No Answer		32	–

Q3-5: Boscalid metabolite M510F01 (AV = 0.081 mg/kg)

		Answer	Ratio
Appropiate		12	92 %
Too High		1	0 %
Too Low		0	8 %
No Answer		34	–

Reply by organisers:

The MRL of boscalid in bovine liver is at 0.2 mg/kg; the assigned value is well below.

Q3-6: Bromoxynil (AV = 0.058 mg/kg)

		Answer	Ratio
Appropiate		24	96 %
Too High		1	4 %
Too Low		0	0 %
No Answer		22	–

Q3-7: DDAC-C10 (AV = 0.178 mg/kg)

		Answer	Ratio
Appropiate		24	92 %
Too High		1	4 %
Too Low		1	4 %
No Answer		21	–

Q3-8: Fenpropimorph carboxylic acid (BF-421-2) (AV = 0.089 mg/kg)

		Answer	Ratio
Appropiate		9	90 %
Too High		1	10 %
Too Low		0	0 %
No Answer		37	–

Q3-9: Flonicamid metabolite TFNA-AM (AV = 0.072 mg/kg)

		Answer	Ratio
Appropiate		17	94 %
Too High		1	6 %
Too Low		0	0 %
No Answer		29	–

Q3-10: Fluopyram-benzamide (M25) (AV = 0.101 mg/kg)

		Answer	Ratio
Appropiate		17	94 %
Too High		1	6 %
Too Low		0	0 %
No Answer		29	–

Q3-11: MPP (AV = 0.309 mg/kg)

		Answer	Ratio
Appropiate		17	94 %
Too High		1	6 %
Too Low		0	0 %
No Answer		29	–

Q3-12: AMPA (AV = 0.751 mg/kg)

		Answer	Ratio
Appropiate		21	88 %
Too High		3	13 %
Too Low		0	0 %
No Answer		23	–

Comments on AV of AMPA:

- (too high): around mrl.
- (too high): about 0.2 – 0.4 mg/kg as the maximum residue level is 0.2 mg/kg

Reply by organisers:

Indeed, the spiking level of AMPA was quite high. We took into account the high MRRL of 0.1 mg/kg (reflecting the analytical difficulties with the analysis of glyphosate in liver) as well as the new MRL-proposal by EFSA (EFSA Journal 2018;16(5):5263), where an MRL of 0.7 mg/kg is proposed for glyphosate (sum) in bovine liver.

Q3-13: N-Acetyl-glyphosate (AV = 0.591 mg/kg)

		Answer	Ratio
Appropiate		**13**	**87 %**
Too High		**2**	**13 %**
Too Low		**0**	**0 %**
No Answer		**32**	–

Comments on AV of N-Acetyl-glyphosate:

- (too high): about 0.2 – 0.4 mg/kg as the maximum residue level is 0.2 mg/kg

Reply by organisers:

Indeed, the spiking level of N-acetyl-glyphosate was quite high. We took into account the high MRRL of 0.1 mg/kg (reflecting the analytical difficulties with the analysis of glyphosate in liver) as well as the new MRL-proposal by EFSA (EFSA Journal 2018;16(5):5263), where an MRL of 0.7 mg/kg is proposed for glyphosate (sum) in bovine liver.

Q3-14: Haloxyfop (AV = 0.036 mg/kg)

		Answer	Ratio
Appropiate		**31**	**94 %**
Too High		**1**	**3 %**
Too Low		**1**	**3 %**
No Answer		**14**	–

Comments on AV of Haloxyfop

- (too low): Haloxyfop > 0.5 mg/kg, because of difficulties with the sensitivity and recovery for those compounds.

Q3-15: MCPA (AV = 0.046 mg/kg))

		Answer	Ratio
Appropiate		34	97 %
Too High		1	3 %
Too Low		0	0 %
No Answer		12	–

Q3-16: Mepiquat (AV = 0.051 mg/kg)

		Answer	Ratio
Appropiate		34	97 %
Too High		1	3 %
Too Low		0	0 %
No Answer		12	–

Q4: Are you satisfied with the preliminary report on the EUPT-SRM14?

Q4-1: Publishing date (within 3 weeks following to the submission deadline)

		Answer	Ratio
5		36	77 %
4		10	21 %
4 + 5		46	98 %
3		1	2 %
2		0	0 %
1		0	0 %
Not Applicable		0	–
No Answer		0	–
Average Rating		4.7	

Positive comments:

- This year we were pleasantly surprised with quick preliminary report.
- It is nice to have the preliminary report in a short delay.
- very fast so that improvements are sensful before analysing the next samples

Reply by organisers:

- Since the EUPT-SRM9 (2014) the preliminary reports on the EUPT-SRMs has been released within three weeks after the results submission. We hope, it helps the participants investigate the reasons for poor performance and improve their proficiency.

Q4-2: Information given in the preliminary report

		Answer	Ratio
5		29	62 %
4		14	30 %
4 + 5		43	91 %
3		2	4 %
2		2	4 %
1		0	0 %
Not Applicable		0	–
No Answer		0	–
Average Rating		4.5	

Positive comments:

- Very satisfied! Fast turnaround.
- for the short reporting period of three weeks it is good
- It's ok.

Comments and suggestions for improvement:

- Errors - updated version needed.

Reply by organisers:

- An update of the preliminary report was necessary due to "transcription" errors happened to two laboratories. As explained under Q1-7 (Submission page), it was due to some permission issues so that we as organizers were not able to export the complete data of these two laboratories.

Q5: Wishes as regards matrices that could be used in the next two or three EUPT-SRMs (focusing on compounds not amenable to multiresidue methods)

Q5-1: Commodity of Animal Origin (e.g. muscle, liver, egg, dried egg, milk, dried milk, honey)

		Answer	Ratio
High Interest		**15**	**32 %**
Medium Interest		**13**	**28 %**
Low Interest		**14**	**30 %**
No Interest		**5**	**11 %**
No Answer		**0**	–

Wishes regarding "commodity of animal origin" or commodity-analyte combinations :

- **Matrix**
  - milk (5×), dried milk (1×)
  - muscle (4×)
  - egg (4×)
  - honey (2×)
  - fish (1×)

- **Matrix : Compounds**
  - milk / dried milk / milk / milk based babyfood: products – glyphosat (2×) and metabolites (2×), BACs and DDAC, chlorate
  - eggs: all compounds, fipronil (other biocides, residues of desinfections), glyphosate
  - honey: glyphosate (2×), amitraz
  - fish: chlorate, perchlorate, BAC, DDAC
  - liver: glyphosate
  - fat (poultry), fat (bovine): glyphosate
  - EU-coordinated matrices: EU-coordinated analytes

Reply by organisers:

- The suggestions will be taken into consideration.
- Animal fat is of low relevance for SRM pesticides and metabolites.

Q5-2: Commodity of High Fat content and dry (e.g. nuts or oily seeds):

		Answer	Ratio
High Interest		**5**	**11 %**
Medium Interest		**15**	**32 %**
Low Interest		**19**	**40 %**
No Interest		**8**	**17 %**
No Answer		**0**	–

Wishes regarding "commodity of high fat content and dry" or commodity-analyte combinations:

- **Matrix**
  - nuts
  - sesame seeds
  - poppy seeds

- **Compounds**
  - bicyclopyrone, triflumezopyrim, cyclaniliprole, fenpicoxamid, onion oil, valifenalate

- **Matrix – Compounds**
  - Nuts or oily seeds: 2,4-D, dicamba, diquat, paraquat
  - oil seeds: glyphosate

Reply by organisers:

- The suggestions will be taken into consideration.

Q5-3: Commodity of High Water content (e.g. vegetables and fruits):

		Answer	Ratio
High Interest		**33**	**70%**
Medium Interest		**7**	**15%**
Low Interest		**6**	**13%**
No Interest		**1**	**2%**
No Answer		**0**	–

Wishes regarding "commodity of high water content" or commodity-analyte combinations:

- **Matrix**
  - tomatoes (2×)
  - apple
  - herbs
  - berries, currant, strawberries
  - fruit and vegetables
  - no real preference

- **Compounds**
  - chlorat, phosphonic acid and fosetyl

- **Matrix – Compounds**
  - all matrices: cyromazine
  - common f&v matrices: all. we are obliged to provide PT results to acreditation body
  - EU-coordinated matrices: EU-coordinated analytes
  - high water content commodities: dicamba, triclopyr, mesotrion, tembotrion, ciromasin
  - apple: Glyphosate, dithianon (2×), inorganic bromide, haloxyfop, sulphites, chlorate/perchlorate, dodine, amitraz, fenbutatin oxide, 2,4-D, maleic hydrazide, phenoxy acetic acid, captan, colpet, phosphonic acid, ethephon, fosetyl aluminium
  - Brassica: Chlorothalonil
  - broccoli: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin
  - cabbage: glyphosate, dithianon, inorganic bromide, haloxyfop, sulphites, chlorate/perchlorate, dodine, amitraz, fenbutatin oxide, 2,4-D , maleic hydrazide, phenoxy acetic acid
  - carrots: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin, chlormequat, mepiquat, Ethephon, cyromazine
  - cauliflowers: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin
  - citrus fruits: dithiocarbamate
  - cucumber: TFNA, TFNG, chlormequat, mepiquat, abamectin, emamectin, 2,4-D, fluazifop, fenbutatin oxide, ethephon
  - eggplants: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin, chlormequat, mepiquat
  - grapefruits: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin
  - herbs: QuPPe analytes
  - melons: ethephon, cyromazine
  - onions: ethephon, cyromazine
  - Oranges: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin, ethephon,

cyromazine
- pears: TFNA, TFNG, chlormequat (2×), mepiquat (2×), abamectin, emamectin, 2,4-D (2×), dithianon, fluazifop (2x), haloxyfop, fenbutatin oxide (2×), ethephon (2×), cyromazine, abamectin, emamectin, captan, folpet, phosphonic acid, ethephon, fosetyl aluminium
- potatoes: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin, Ethephon, cyromazine
- salad: glyphosate, dithianon, inorganic bromide, dithiocarbamates, haloxyfop, sulphites, chlorate/perchlorate, dodine, amitraz, fenbutatin oxide, 2,4-D, maleic hydrazide, phenoxy acetic acid
- sweet peppers: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin, ethephon, cyromazine
- table grapes: 2,4-D, dithianon, fluazifop, haloxyfop, fenbutatin oxide, abamectin, emamectin, ethephon, cyromazine, chlormequat, mepiquat
- wine grapes: captan, folpet, phosphonic acid, ethephon, fosetyl aluminium
- grape: TFNA, TFNG, chlormequat, mepiquat, abamectin, emamectin, 2,4-D, fluazifop, fenbutatin oxide, ethephon, captan

Reply by organisers:

- The suggestions will be taken into consideration.

Q5-4: Commodity of High Fat content and intermediate water content (e.g. avocado, olives):

		Answer	Ratio
High Interest		**8**	**17 %**
Medium Interest		**22**	**47 %**
Low Interest		**12**	**26 %**
No Interest		**5**	**11 %**
No Answer		**0**	–

Wishes regarding "commodity of high fat content" or commodity-analyte combinations:

- **Matrix**
  - olive oil (2×)
  - avocado
  - olive
  - cereal grain and products thereof incl. cereal based composite feed

- **Compounds**
  - bicyclopyrone, triflumezopyrim, cyclaniliprole, fenpicoxamid, onion oil, valifenalate

- **Matrix – Compounds**
  - EU-coordinated matrices: EU-coordinated analytes
  - avocado: glyphosate, dithianon, inorganic bromide, haloxyfop, sulphites, chlorate/perchlorate, dodine, amitraz, fenbutatin oxide, 2,4-D (2x), maleic hydrazide, phenoxy acetic acid, chlorthalonil, avermectin, dicamba, diquat, paraquat
  - olive: glyphosate, dithianon, inorganic bromide, haloxyfop, sulphites, chlorate/perchlorate, dodine, amitraz, fenbutatin oxide, 2,4-D , maleic hydrazide, phenoxy acetic acid

Reply by organisers:

- The suggestions will be taken into consideration.

Q5-5: Cereals

		Answer	Ratio
High Interest		27	57 %
Medium Interest		15	32 %
Low Interest		2	4 %
No Interest		3	6 %
No Answer		0	–

Wishes regarding "commodity cereals" or commodity-analyte combinations:

- **Matrix**
  - wheat (2×)
  - oat

- **Compounds**
  - glyphosate (3x), glufosinate, Herbicides, chlormequat, mepiquat

- **Matrix – Compounds**
  - all cereals / grains: all compounds, in particular glyphosate, sulfonylureas
  - common cereal matrices: all. we are obliged to provide PT results to acreditation body
  - EU-coordinated matrices: EU-coordinated compounds
  - buckwheat: glyphosate (2x) + metabolites, AMPA, TFNA, TFNG, chlormequat, mepiquat, abamectin, emamectin, 2,4-D, fluazifop, fenbutatin oxide, ethephon
  - maize: glyphosate, AMPA, TFNA, TFNG, chlormequat, mepiquat, abamectin, emamectin, 2,4-D, fluazifop, fenbutatin oxide, ethephon
  - oat: glyphosate
  - processed cereals,flour, bread: chlormequat, mepiquat
  - rice: glyphosate, dithianon (2x), inorganic bromide, haloxyfop, sulphites, chlorate/perchlorate, dodine, amitraz, fenbutatin oxide, 2,4-D (2x) , maleic hydrazide, phenoxy acetic acid, fluazifop, haloxyfop, chlormequat, mepiquat, abamectin, emamectin, ethephon
  - rye: glyphosate, AMPA, TFNA, TFNG, chlormequat (2x), mepiquat (2x), abamectin (2x), emamectin (2x), 2,4-D (2x), fluazifop (2x), fenbutatin oxide, ethephon (2x), dithianon, fluazifop, haloxyfop,
  - wheat: glyphosate, 2,4-D, dithianon, fluazifop, haloxyfop, chlormequat, mepiquat, abamectin, emamectin, ethephon

Reply by organisers:

- The suggestions will be taken into consideration.

Q5-6: Pulses

		Answer	Ratio
High Interest		**6**	**13 %**
Medium Interest		**19**	**40 %**
Low Interest		**15**	**32 %**
No Interest		**7**	**15 %**
No Answer		**0**	–

Comments and suggestions for improvement:

- **Matrix**
  - beans
  - chickpeas
  - lentils

- **Compounds**
  - bicyclopyrone, triflumezopyrim, cyclaniliprole, fenpicoxamid, onion oil, valifenalate

- **Matrix – Compounds**
  - beans: glyphosate, AMPA, TFNA, TFNG, chlormequat, mepiquat, abamectin, emamectin, 2,4-D, fluazifop, fenbutatin oxide, ethephon
  - green bean: glyphosate, dithianon, inorganic bromide, haloxyfop, sulphites, chlorate/perchlorate, dodine, amitraz, fenbutatin oxide, 2,4-D, maleic hydrazide, phenoxy acetic acid
  - lentils: glyphosate, AMPA, TFNA, TFNG, chlormequat, mepiquat, abamectin, emamectin, 2,4-D, fluazifop, fenbutatin oxide, ethephon
  - peas: glyphosate, AMPA, TFNA, TFNG, chlormequat, mepiquat, abamectin, emamectin, 2,4-D, fluazifop, fenbutatin oxide, ethephon
  - Pulses: captan, folpet, captafol, chlorothalonil

Reply by organisers:

- The suggestions will be taken into consideration.

Q5-7: Feed

		Answer	Ratio
High Interest		**9**	**19 %**
Medium Interest		**7**	**15 %**
Low Interest		**13**	**28 %**
No Interest		**18**	**38 %**
No Answer		**0**	–

Wishes regarding "feed" or commodity-analyte combinations:

- **Matrix**
  - babyfoods, infant formulas
  - maize
  - rape seed
  - soy

- **Compounds**
  - Glyphosate, bicyclopyrone, triflumezopyrim, cyclaniliprole, fenpicoxamid, onion oil, valifenalate

- **Matrix – Compounds**
  - feed with high fat content (2x): captan, folpet, captafol, chlorothalonil, glyphosate (2x), fenoxyacids, chlormequat, mepiquat

Reply by organisers:

- The suggestions will be taken into consideration.

Q5-8: „Difficult matrices“ of plant origin (e.g. tea, spices)

		Answer	Ratio
High Interest		**7**	**15 %**
Medium Interest		**18**	**38 %**
Low Interest		**15**	**32 %**
No Interest		**7**	**15 %**
No Answer		**0**	–

Wishes regarding “difficult matrices of plant origin” or commodity-analyte combinations:

- **Matrix**
  - tea (5×)
  - goji berry
  - spice

- **Matrix – Compounds**
  - black & white pepper: ethylene oxid / ethylen chlorhydrin
  - chilipowder: Ethylene oxid / ethylen chlorhydrin
  - ginger powder: dicamba, captan, folpet, captafol, chlorothalonil
  - nutmeg: ethylene oxid / ethylen chlorhydrin
  - mint (dried): glyphosate
  - pepperpowder: chlorate, bromide
  - spices: phenoxycarbon acids, div. substances, also fumigants
  - tabaco: TabakVO
  - tea / matcha-tea: Anthrachinon, Chlormequat
  - tea / coffee: All compounds

Reply by organisers:

- The suggestions will be taken into consideration.