WORK PROGRAMME of EURL for

PESTICIDES REQUIREING SINGLE RESIDUE METHODS

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CONTACT DETAILS

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SUMMARY

INTRODUCTION

The concept of the EU Reference Laboratories (EURLs, former CRLs) and National Reference Laboratories (NRLs) is laid down in the Regulation (EC) No 882/2004 of the European Parliament and of the Council. From 29 April 2018 onwards Regulation (EU) 2017/625 shall apply.

The overall objective of the EURLs is the improvement and harmonisation of methods of analysis to be used by official laboratories and of the analytical data generated by them. The European Union reference laboratories should in particular ensure that NRLs and official laboratories (OfLs) are provided with up-to-date information on available methods, organise or participate actively in inter-laboratory comparative tests and offer training courses for national reference laboratories or official laboratories.

The responsibilities of the EURLs are laid down in Article 32 of Reg. 882/2004. From 29 April 2018 onwards Article 94 of Reg. 625/2017 will apply, which foresees the following responsibilities (insofar included in the work programmes):

- providing NRLs with details of analytical methods, including reference methods;
- providing reference materials to national reference laboratories;
- coordinating the application of methods by NRLs by the organisation of regular inter-laboratory comparative testing or proficiency tests;
- coordinating practical arrangements necessary to apply new methods;
- conducting training courses for staff from national reference laboratories and, if needed, from other official laboratories, as well as of experts from third countries
- providing scientific and technical assistance to the Commission;
- providing information on relevant national, Union and international research activities to national reference laboratories;
- collaborating with laboratories in third countries and with EFSA;
- establishing and maintaining up-to-date lists of available reference substances and reagents and of manufacturers and suppliers of such substances and reagents
- cooperate among themselves and with the Commission, as appropriate, to develop methods of analysis
- publish the list of the national reference laboratories designated by the Member States;

Regulation (EU) 625/2017 Art 94(2):
European Union reference laboratories designated in accordance with Article 93(1) shall be responsible for the following tasks insofar as they are included in the reference laboratories' annual or multiannual work programmes that have been established in conformity with the objectives and priorities of the relevant work programmes adopted by the Commission in accordance with Article 36 of Regulation (EU) No 652/2014:
(taking into account Art 147 of (EU) 625/2017)

1 TO ENSURE AVAILABILITY AND USE OF HIGH QUALITY METHODS AND TO ENSURE HIGH QUALITY PERFORMANCE BY NRLs.

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- *Art. 94.2.a* ***Providing national reference laboratories with details and guidance on the methods of laboratory analysis, testing or diagnosis, including reference methods.***

- *Art. 94.2.b* ***Providing reference materials to national reference laboratories***

- *Art. 94.2.c* ***Coordinating the application by the national reference laboratories and, if necessary, by other official laboratories of the methods referred to in point (a), in particular, by organising regular inter-laboratory comparative testing or proficiency tests and by ensuring appropriate follow-up of such comparative testing or proficiency tests in accordance, where available, with internationally accepted protocols, and informing the Commission and the Member States of the results and follow-up to the inter-laboratory comparative testing or proficiency tests.***

- *Art. 94.2.l* ***Where relevant for their area of competence, cooperate among themselves and with the Commission, as appropriate, to develop methods of analysis, testing or diagnosis of high standards.***

Sub-activity 1.1 Provide NRLs with details and guidance on the methods of laboratory analysis, testing or diagnosis, including reference methods.

Keep Joint EURL-Portal-Website and individual EURL-SRM Website up-to-date (www.eurl-pesticides.eu)

Objectives: Provide visitors of the joint portal website and the specific EURL-SRM website with up-to-date information of interest and in particular access to analytical methods.

Background: Following an agreement between the COM and the other 3 EURLs on pesticides the EURL-SRM has introduced a Joint EURL-Website for the four pesticide EURLs (www.eurl-pesticides.eu). The Joint EURL-Website aims to facilitate the dissemination of information to NRLs and OfLs in an efficient, timely and transparent way. It consists of a joint portal-website that is administered by the EURL-SRM as well as by 4 individual websites that are administered by the 4 respective EURLs. The information provided includes links to documents of analytical methods that were either developed or validated by the EURLs. Each EURL-website contains its own list of methods but a general overview of methods concerning compounds of relevance to monitoring activities is published in the portal site (Method finder list, see also Sub-section 2.1).

Description: In 2018 the joint portal-website and the individual web-sites of the EURLs will be further upgraded and gradually filled with new information (e.g. method protocols, workshop reports, EUPT-reports etc.). Existing links, overview-sites as well as documents will be updated. Where necessary new pages or features will be gradually added considering the needs and suggestions by DG-SANTE, the EURLs and the lab-Network.

Sub-activity 1.2 Follow up on requests from NRLs for providing analytical standards

Standard Distribution Service

Objectives: Facilitate the expansion of the analytical scope of NRLs by providing them with analytical standards.

Description: Where NRLs have difficulties expanding their scope due the non-availability in the market of analytical standards of pesticides and metabolites or of isotopically labelled internal standards (ILIS), the EURL-SRM will be offering, upon request, stock or working solutions, so far these are available in sufficient amounts. The synthesis of ILISs for chlorate and phosphonic acid and their distribution to labs will be continued. A document showing sources of certain analytical standards will be generated (see subchapter 4.1).

Sub-activity 1.3 Analysis of official samples

Analysis of official samples - counter analysis (if required)

Objectives: Analyze samples in case of disputes

Description: The EURL will ask DG-SANTE for approval of any activity concerning this, and request for additional eligible budget, if required.

Sub-activity 1.4 Organisation of proficiency tests and follow up on the results

EU Proficiency Test SRM 13

Objectives: Give labs the possibility labs to check and demonstrate their proficiency when applying routine or newly established methods. Help labs localize sources of errors and provide assistance for eliminating them.

Description: Following consultations with the EUPT-Scientific Committee the commodities for the EUPT-SRM12 were narrowed down to two options: dry soy beans or fresh beans. The final decision will be taken following preliminary tests. The PT material will be spiked, homogenized and portioned. The relevant homogeneity and stability tests will be conducted following international protocols. All relevant documents and instructions will be distributed to the participants through the EURL website. Both participant registration and collection of results and method information will be conducted using online tools. Each participant will receive a detailed report summarizing the PT-scope, results, z-score calculation and, where relevant, evaluations regarding the influence of methods or particular analytical steps on the performance. Prior to, during and after the EUPT, the EURL-SRM will furthermore address any PT-related requests of participating labs. At request, NRLs will be provided with information regarding OfLs within their network. Underperforming NRLs will be assisted. The PT results will be discussed with EUPT-Scientific Committee as well as during the joint EURL-FV/CF workshop. The participants will finally receive a customized certificate of participation.

Administrative procedures for the registration of labs in EUPTs and the identification of labs that are obliged to participate in EUPTs (horizontal task for the benefit of all 4 EURLs)

Objectives: Update information on function and commodity scope of OfLs/NRLs. Use this information to determine which laboratories are obliged to participate in each EUPT organized in 2018. Ensure a smooth and uniform registration of laboratories for participation in all EUPTs organized by EURLs in 2018. Enable the export of specific participant's information in a format that can be easily imported in the EUPT data submission tool run by the EURL-CF. Make sure that all labs familiarize with the procedures of the new EUPT-administration system. Provide assistance to any OfL requires help in updating data or registering for the EUPT and to all NRLs requiring assistance in administering the data of its OfL network.

Background: The organization of proficiency tests involves several procedures. The four EURLs of the pesticide cluster have decided to harmonize these procedures as far as possible for the benefit of the participating laboratories. Most of the tasks were allocated to the EURL-SRM as all lab-specific data is administered within the EURL-DataPool, the central information management tool of the 4 EURLs. The main harmonized PT-administration

procedures are the following:

a) Collection/updating of data relevant to the EUPTs (e.g. PT-contact persons, sample delivery address, invoice address …*);*

b) Collection/updating of information regarding the commodity scope profiles of the 284 laboratories within the network (note: this information e.g. analysis of cereals on behalf of Belgium, is filled-in by the OfLs and confirmed by the NRLs);

c) Establishment of a list showing which labs are obliged to participate in each EUPT organized by the EURLs (note: the list is generated based on the commodity scope profiles and comments provided by the OfLs, participation in EUPTs is mandatory for all laboratories involved in official controls on pesticides as far as the scope of the EUPT overlaps with their analytical scope. The pesticide scope of the labs is not taken into account in this, *NRLs are responsible to check their national lab-network for completeness and report any errors);*

d) Registration of labs in EUPTs (Note: obliged labs not participating are requested to provide explanations, information relevant to the EUPT can be completed/updated here, this information will be stored in the database and will be available for future PTs);

e) Collection of EUPT results and methodology information.

The first 3 procedures are run within the EURL DataPool (www.eurl-datapool.eu) and the fourth within the EUPT Registration Tool (www.eupt-registration.eu*) which is directly linked to the DataPool. These two tools are administered by the EURL-SRM, whereas the EUPT result submission tool is administered by the EURL-CF.*

Description: The EURL-SRM will ask the OfLs and NRLs to login to the EURL DataPool in order to update the data on the commodity types covered within their routine sample scope. In parallel, all NRLs will be asked to confirm or reject the information given by the labs belonging to their network. Based on the (confirmed) commodity-scope of each OfL and additional comments provided by the labs, the EURL-SRM will define, for all EUPTs organized by the EURLs in 2018, the participation status of all laboratories. This information will be entered into the EURL-DataPool and will be accessible to OfLs/NRLs when entering the EUPT Registration Tool (www.eupt-registration.eu). Labs will be asked to register for the EUPTs they wish to participate. Labs deciding not to participate at a certain PT for which they are obliged to participate, will be asked to provide an explanation. NRLs will be asked to cross-check the registered OfLs of their lab-network, to identify missing labs and to get into contact with them if needed. The EUPT organizers (the four EURLs) will be asked to download, from the EURL DataPool, the list of labs having registered, and submit it to the programmer of the EUPT-result submission website hosted by EURL-CF.

Import of EUPT-results from 2017 into the EUPT-Archive

Objectives: Import of results from EUPT-FV19, CF11, AO12 and SRM12 into the EUPT-Archive

Description: The results of the EUPTs organized in 2017 will be collected form the individual EURLs and formatted as necessary to be introduced into the EUPT-Archive DB within the EURL-DataPool.

Sub-activity 1.5 Cooperation and meetings with other EURLs

EURL Coordination

Objectives: Cooperation and meetings with other EURLs for coordination purposes

Description: Inter-EURL-meetings, in some cases in presence of DG-SANTE representatives, will be carried out with the aim to discuss, plan, coordinate or evaluate EURL-activities such as the preparation of work programs, workshops, EUPTs or web-applications. This activity may involve one or several missions of EURL-SRM staff. In certain cases online-meetings or tele-conferences will be carried out. Date and place of these events will be decided later.

Cooperation between EURL-SRM and EURL-Mycotoxins/EURL-Planttoxins

Objectives: Study on a possible incorporation of the lab-network of the EURL-Mycotoxins/EURL-Planttoxins to the EURL DataPool-database.

Description: The newly announced EURL-Mycotoxin/Planttoxins expressed interested in the concept of EURL DataPool as well as in its features and tools. To make use of existing experiences and tools plus exploit synergy potentials, the EURL-Mycotoxin/Planttoxins and the EURL-SRM will jointly compare the infrastructure and the necessities of both EURL-networks. The aim of this project is to find out if both networks have similar requirements as regards (a) the communication infra-structure within the individual EURL/NRL/OFLs networks, (b) the registration for EUPTs, (c) the database structure for the storage of method validation data, compound property data and compound stability data. If the outcome of this study is that the inclusion of the EURL-Mycotoxin/Planttoxin-network's requirements into EURL DataPool can be conducted at reasonable costs, the EURLs will contact COM for approval of this concept in work program 2019.

Sub-activity 1.6 Development and validation of analytical methods

Further development of the Quick Polar Pesticides Method (QuPPe Method)

Objectives: Further develop the QuPPe method to improve analysis of several problematic compounds in various commodities

Background: The EURL-SRM has introduced a method for the simultaneous analysis of several highly polar pesticides not amenable to multiresidue procedures (QuPPe method). The QuPPe method involves a common one-phase extraction step followed by various LC-MS/MS analysis options. It is nowadays employed by many OfLs.

Description: The main focus will be in testing further possibilities for LC-separation and/or cleanup in order to improve the analysis of the most problematic among the QuPPe-compounds (e.g. glyphosate). In the case of glyphosate analysis in Kidney and liver will be checked.

Interlaboratory Validation of the QuPPe method ("Glyphosate&Co." group of compounds)

Objectives: Pursue a standardization of the QuPPe method at CEN level through an interlaboratory method validation study for polar compounds analysed in the LC-MS/MS ESI neg. mode ("Glyphosate&Co.").

Description: An interlaboratory validation of the QuPPe method for compounds within the "Glyphosate&Co." group (Ethephon, HEPA, (Ethephon metabolite), Glyphosat, AMPA (Glyphosate metabolite), N-acetylglyphosate (Glyphosate metabolite), N-acetyl-AMPA (Glyphosate metabolite), Glufosinate, MPPA (Glufosinate metabolite), N-acetyl-glufosinate (Glufosinate metabolite), Fosetyl-Al, Maleic hydrazide, Cyanuric acid and Bialaphos). The intention is to cover all glyphosate relevant compounds and most of the other compounds mentioned above considering practical and legal aspects. The validation scope will include one commodity from each main commodity groups of plant origin (high water, high acid, high fat, dry) and at least one commodity of animal origin included in the MACP regulation (e.g. milk or egg). The inclusion of liver or kidney in the study will be considered depending on the progress of the method development (see task below). NRLs and OfLs will be invited to participate in this interlaboratory validation study.

Studies on the Analysis of Captan and Folpet

Objectives: Study the analysis of Captan (sum) and Folpet (sum) via GC and LC.

Description: Studies will be conducted to improve the analysis Captan (sum) and Folpet (sum). These may include hydrolysis of the parents to their degradation products at different stages of analysis and the direct determination of parents and degradation products via LC-MS/MS. The study may include experiments to elucidate the formation of THPI in the GC-injector.

Background: The residue definitions for Captan and Folpet have recently been amended to include the metabolites THPI and phthalimid. Analysis is challenging due to the degradation of the parents in the GC-Injector and difficulties to distinguish between the degradation products originally contained in the sample and those generated during analysis. Analysis via LC-MS/MS does not show the degradation problems but is generally characterized by a low detection sensitivity

Enantioselective Separation of the Constituent Isomers of Lambda Cyhalothrin

Objectives: Develop a method for the enantioselective separation of the constituent isomers of lambda cyhalothrin (RS and SR) in order to gain the ability to separately quantify (where necessary) the SR isomer (= gamma cyhalothrin), which is the most toxic component and to distinguish whether gamma- or lambda-cyhalothrin was applied in the field..

Background: Cyhalothrin is a mixture of 4 isomers (RS, SR, RR, SS). This compound is not approved for use in agriculture. Lambda-cyhalothrin is a 1:1 mixture of 2 of these 4 isomers (RS and SR). Its approval was renewed by Reg. 146/2016/EU. Gamma-cyhalothrin is constituted only by the SR-

isomer, the most toxic of the 4 isomers. Gamma cyhalothrin is approved as active substance under Reg. 1334/2014/EU. Using traditional separation techniques the constituent isomers of lambda cyhalothrin (SR and RS) cannot be chromatographically separated. This makes it impossible to distinguish between lambda and gamma cyhalothrin or to separately quantify the toxicologically most critical SR-isomer. The ability for a proper risk assessment is thus limited. Several of the current MRLs of lambda cyhalothrin would be toxicologically critical if calculated assuming that the residue is entirely composed by the SR-isomer (conservative assessment approach). For a proper risk assessment an enantioselective separation of gamma cyhalothrin (RS-isomer) is thus paramount. In SANCO/12745/2013, support by the EURLs is requested on this compound. EFSA has also expressed its wish that the EURLs work in this direction as this would facilitate risk assessment. An enatioselective separation would also provide the ability to distinguish whether gamma- or lambda cyhalothrin was applied in the field.

Description: Develop a method that would allow the enantioselective separation of the two constituent isomers of lambda cyhalothrin (RS and SR) .

Sub-activity 1.7 Development and validation of analytical methods

Analysis of Dimethoate/Omethoate Metabolites

Objectives: Develop a method for the analysis of 6 Omethoate/Dimethoate metabolites that, according to the EFSA prioritizes review according to Article 43 of Regulation (EC) No 396/2005, form in many cases a major part of the residue. Use this method for the analysis of market samples in order to collect residue data on these metabolites that may help in a future risk assessment and risk management decisions on omethoate and dimethoate.

Background: The "Prioritised review of the existing maximum residue levels for dimethoate and omethoate according to Article 43 of Regulation (EC) No 396/2005" lists several metabolites of omethoate and dimethoate which often form the main part of the residue and in some cases are the only markers due to the absence of dimethoate and omethoate. Toxicological evaluation of these metabolites is pending.

Description: For the following metabolites (as far as available) it will be checked which of these metabolites are amenable to the QuECHERS and the QuPPe method.

- Metabolite XXIII: O-desmethyl-N-desmethyl omethaoate
- Metabolite XI: O-desmethyl-omethoate
- Metabolite XII: des-O-methyl isodimethoate
- Metabolite XX: O-desmethyl omethoate carboxylic acid
- Metabolite X: O-desmethyl-dimethoate
- Metabolite III: dimethoate carboxylic acid

Following establishment of the analytical approach the method will be applied to the analysis of market samples to assess the residue situation in various crops.

Analysis of 4-Amino- meta-toluic acid (main metabolite of amitraz in eggs)

Objectives: Develop a method for the analysis of 4-Amino- meta-toluic acid, the main metabolite of amitraz in egg.

Background: Amitraz was one of the pesticides applied in chicken farms. Analysis of eggs from chicken farms where the use of amitraz was suspected did, however, not show any significant residues of amitraz parent or of the two main metabolites DMPF and DMF. According the JMPR

Evaluations of 1998 following a feeding study 4-amino-meta-toluic acid is the main degradation product of amitraz expected in eggs. In a feeding study it accounted for 91% of the residue (TRR) in egg white (as both free acid and labile conjugates) and for 34% of the TRR in egg yolk. The second important metabolite was N-methyl- N'-(2,4-xylyl) formamidine (=DMPF) accounted for 54% of the residue in egg yolk. Its residues in egg white were insignificant. 4-amino- *meta*-toluic acid *was furthermore the main metabolite in chicken liver (55% of the TRR) and muscle (81% of the TRR).*
Description: A method for the analysis of *4-amino-meta-toluic acid in eggs will be developed.* The developed method will be applied for the analysis of egg samples and in case of positive findings various hydrolysis conditions will be checked to maximize the yields of free *4-amino-meta-toluic acid (cleavage of conjugates)*.

Sub-activity 2.3 Organisation of training courses

Compilation of carbon disulphide findings non-originating from dithiocarbamate pesticides
Objectives: Support EFSA and DG-SANTE to evaluate the background levels of carbon disulphide in various crops and to establish reasonable MRLs for dithiocarbamates. This is to be accomplished by generating data on carbon disulphide background levels in organic crops and by coordinating the generation of data by OfLs. The basic aim is to collect at least 59 analytical results per commodity. An additional aim is to further study the influence of sample homogenization conditions on the natural generation of CS2 precursor compounds.
Description: This task will involve the installation of an online tool to allow the coordination and stirring of the analyses on CS2 background levels by the different official laboratories within the EU. This tool should give the ability to collect information about the initial intentions of the OfLs and at a later stage about the actual analytical data and their distribution. The tool should differentiate between “rare” and “common” matrices and show “in real time” the available number of data. Certain rules should be established to promote the analysis of “rare” matrices, such as a minimum number or percentage of samples from the “rare” group and a maximum number or percentage of samples from the “common” group. At a first stage the laboratories should indicate the approximate number and type of samples they intend to analyse. The EURL-SRM (in coordination with EFSA and the DG-SANTE) will then evaluate the situation and where necessary encourage the labs to adjust their plans to ensure a good representation of “rare” commodities, a good geographic distribution and that certain “common” commodities are overrepresented. During the data collection phase laboratories will be able to directly enter their data into the system (e.g. type of sample, origin, numerical result, type of sample such as organic, own cultivation, important notes). The laboratories will also be asked to give details about their methodology especially as regards the preparation of the analytical portion. Furthermore the EURL-SRM will generate additional data for certain “rare” crops and further study influence of sample homogenization conditions on the natural generation of CS2 precursor compounds.
Background: A large number of commodities naturally contain compounds that can directly or through intermediate products lead to the generation of CS2 during the acidic digestion/hydrolysis step of methods used for the analysis of dithiocarbamates. As this CS2 generated from naturally-occurring compounds cannot be distinguished from the CS2 generated from residues of dithiocarbamate pesticides, there is a strong interest to determine the range of CS2-levels released during analysis. This knowledge will help in setting MRLs and evaluating CS2-levels more reasonably. In 2017, the EURL-SRM and EFSA jointly elaborated a list of crops suspicious to release CS2 during analysis. This list was distributed to the MS in November 2017 with the aim that products prioritized within this document will be included in the national and regional control programs.

2 TO PROVIDE SCIENTIFIC AND TECHNICAL ASSISTANCE TO NRLs

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- *Art. 94.2.d* ***Coordinating practical arrangements necessary to apply new methods of laboratory analysis, testing or diagnosis, and informing national reference laboratories of advances in this field.***
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- *Art. 94.2.e* ***Conducting training courses for staff from national reference laboratories and, if needed, from other official laboratories, as well as of experts from third countries.***
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- *Art. 94.2.g* ***Providing information on relevant national, Union and international research activities to national reference laboratories.***

Sub-activity 2.1 Providing technical and scientific support to NRLs

EURL-DataPool-Services

Objectives: Create and maintain a database platform allowing systematic collection of information of practical use for analysts in the area of pesticide residues. Enable easy and targeted retrieval of this information by the analysts. Create added value through linkage of information.

Background: Following an agreement between the COM and the other 3 EURLs, the EURL-SRM has installed the "EURL-DataPool Service" entailing eight interlinked databases that can be accessed via www.eurl-datapool.eu (= output I). The EURL-DataPool Service is administered by the EURL-SRM as a horizontal activity and aims to a) store general and up-to-date information about the entire network of laboratories working in the area of pesticides, which help to illustrate, and at the same time, strengthen the laboratory network (see also sub-activity 2.7), b) facilitate the conservation of knowledge about pesticides, and c) offer NRLs/OfLs, EURLs, as well as COM and EFSA, fast access to valuable information that can be used to assist decision-making and strategic planning (= output II). Special focus is being placed on the generation, collection and evaluation of experimentally-obtained data generated by various laboratories including the EURLs (e.g. MS/MS-transitions, LC- and GC-high resolution MS data, method validation data, stability data of compounds and EUPT data).

Description: In 2018 the existing databases will be maintained and filled up with further data, see individual tasks in the table below.

Databases/Website/ eTools	Task	Examples where DB is used/interlinked
EURL-DataPool-website (www.eurl-datapool.eu)	The .NET Framework of the website will be further upgraded in order to keep the website constantly up-to-date with new web-developments.	See below (Link DataPool)
Analytical Methods DB	Data collection on various methods and its import into the DB (needed in the master-data for Stability DB, Method Validation DB)	a) Method Validation DB, b) Method Finder

Method Validation DB	Data on recovery rates achieved by various labs using various methods (e.g. QuEChERS, QuPPe, QuOil, SweEt) and experimental details of the recovery experiments, will be collected in cooperation with NRLs and/or EURLs and imported into the DB. Special focus will be set on substances which are in the process of re-evaluation of MRLs and residue definitions within the frame of Art. 12 / Reg. 396/2005. Here, an excel-based data-submission file will be send to OfLs asking for validation data on specific compounds.	a) "Art. 12" activities, b) Pesticides DB, c) Pesticide Ranking List (PeRL), d) Analytical Methods DB, e) Tool for the Estimation of the Measurement Uncertainty
Pesticides DB	Generation or collection of further data for the characterization of pesticides (e.g. GC-, LC-amenability, analytical behaviour, GC-MS-spectra, GC-MS/MS-transitions; LC- and GC-high resolution MS-data, solubility in acetonitrile) and import into the DB. This includes the creation of new entries for pesticides and metabolites not yet in the DB. GC-high resolution Orbitrap-MS-data for 358 compounds submitted by the Dutch NRL will be imported.	a) "Art. 12" activities, b) Pesticide Ranking List (PeRL), c) Method Validation DB, d) Stability of Compounds DB, e) Method Finder List
Stability of Compounds DB	Collection of more stability data on pesticides/metabolites and import into DB. This task strongly depends on the submission of stability data by other labs. The EURL-SRM is in contact with several labs that generated a considerable amount of pesticide stability data. Still submission of this data to EURL DataPool depends on the willingness of the labs. Results from stability experiments conducted by EURL-SRM will be imported (MS- and NMR-data).	Pesticides DB
Pesticide Authorizations DB	Data collection and updating as well as import into the DB of information about the authorization of pesticides in the EU and some third countries.	Pesticide Ranking List (PeRL)
Commodities DB	Data collection on commodities and import into the DB.	Validation DB
MRL Residue Definitions DB	- Updating of EU MRL residue definitions on regular basis - Codex MRL residue definitions (once a year after the annual CCPR-meeting); - Updating of compound conversion factors within DB	a) "Art. 12" activities, b) Pesticide Ranking List (PeRL), c) Pesticides DB, d) Tool for Calculation of Sum
EUPT Registration Tool	In 2017, the EUPT Registration website (www.eupt-registration.eu) was introduced and will be used for the EUPTs to be conducted in 2018. The 4 EURLs will discuss and jointly decide on refinements/ upgrades/improvements of the website. Modi-fications will be implemented if needed.	a) EUPT Registration website (www.eupt-registration.eu)

EURL Method Finder List
(Link: http://www.eurl-pesticides.eu/docs/public/tmplt_article.asp?CntID=629&LabID=100&Lang=EN)
Objectives: Provide the network laboratories with an overview and facilitate access to methods that have been developed or validated by the EURLs as regards compounds included in MACP 2019-2020 and MACP-working document.
Background: The EURL Method Finder List gives an overview of the EURL-methods, -validation reports, and -analytical observation reports released by the EURLs and concerning compounds that are included in the MACP-Regulations and the MACP-WDs.
Description: The list will be periodically updated to include any new methods released.

Sub-activity 2.2 Organisation of workshops

Joint EURL-SRM/EURL-FV Workshop for Pesticide Residues in Food & Feed
Objectives: Strengthen relationship within the lab network, disseminate knowledge, provide up-to-date information, and discuss results of EUPTs
Description: In the second half of 2018 a workshop will be organized in collaboration with the EURL-FV. NRLs from all MS will be invited to attend the workshop, with the main objective to facilitate the interaction between them and the EURLs. The workshop will be held during two days, and will entail technical and scientific communications regarding new activities of the EURLs and other developments in the field of pesticide residues analysis.

Sub-activity 2.3 Organisation of training courses

NRL-Training
Objectives: Provide up-to-date information on methods, provide hands-on training, discuss individual analytical problems
Description: Representatives of 8 to 10 NRLs will be invited to attend a training in Fellbach in 2018. The training will cover technical aspects as regards the analysis of SRM-pesticides and the exchange of experiences among participants. Special needs and problems of the laboratories selected to participate will be considered in the design of the training program. Additional ad-hoc trainings may be conducted as requested.

Sub-activity 2.4 Visits of NRLs

Visit of one NRL
Objectives: Provide on-site assistance and support to NRLs phasing difficulties of analytical or organizational nature.
Description: In 2018 the NRL-SRM of one selected country will be visited by representatives from the EURL-SRM. The country to visited will be selected giving emphasis on poor EUPT scope, performance or participation over the last years as well as on poor cooperation with the EURL. Prior to the inspection a detailed study of the EUPT results during the last years as well as the current analytical scope of all OfLs will be carried out. During the visit the possible reasons for bad PT-performance will be discussed, where applicable, and advices will be given to improve performance and to expand the scope.

Sub-activity 2.5 Organisation of webinars

Webinars and Tutorials
Objectives: Disseminate information of interest to laboratories in a cost-effective way

Description: In 2018 the EURL-SRM will organize/publish at least one webinar or one video-tutorial either individually or in collaboration with other EURLs. Webinars and Video-Tutorials provide the possibility to disseminate information to NRLs and OfLs in a cost effective way.

Sub-activity 2.6 Providing relevant information on national, Union and international research activities to NRLs

Update the "SRM-Pinboard"

Objectives: Promote the concept of sub-contracting analyses of SRM compounds among the laboratories within the Lab-Network. Provide laboratories interested in subcontracting certain analyses to other labs or laboratories interested in getting subcontracted by other labs, a platform and tool that will help them to conveniently find each other.

Background: Within the frame of official controls, SRM analytes are less frequently analyzed compared to MRM analytes. OfLs often complain that limited resources prevent them from establishing suitable methods for the analysis of SRM-analytes or applying such methods in case they are established. Lab-cooperation and subcontracting of analyses can help to reduce the overall number of labs that will have to establish or apply SRMs thus improving overall efficiency and frequency of analysis of SRM compounds.

Description: In 2018 the current excel format will be exchanged by an interactive and user-friendly on-line tool facilitating the meeting of laboratories that are interested in collaborating the area of SRM analyses. The list of laboratories considered as proficient for the analysis of individual SRM-compounds will be updated as soon as new PT results become officially available or whenever a lab wishes to enter the list or change its status. This task was originally planned for 2017 but it was shifted to 2018 in agreement with DG-SANTE.

Sub-activity 2.7 Updating and publication of the list of NRLs

Lab Network Database (hosted in EURL DataPool)

Objectives: Permanent updating of lab-specific information of NRLs and OFLs.

Background: Various editing-forms were introduced in EURL DataPool to allow NRLs and OFLs to update specific data about their lab: lab contact data, lab-functions, update of email-addresses of lab-members, lab-tasks within the frame of official controls (import controls, commodity scope, pesticide scope, etc.).

Description: The EURL-SRM will ask all NRLs and OFLs to keep this information up-to-date on several occasions throughout the year. The EURL-SRM will assign new members to their "myLab"-area within EURL DataPool. This task has to be done by members of the EURL-SRM for reasons of data confidentiality.

3 TO PROVIDE SCIENTIFIC AND TECHNICAL ASSISTANCE TO THE EUROPEAN COMMISSION AND OTHER ORGANISATIONS

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- *Art. 94.2.f* ***Providing scientific and technical assistance to the Commission within the scope of their mission.***

- *Art. 94.2.h* ***Collaborating within the scope of their mission with laboratories in third countries and with the European Food Safety Authority (EFSA), the European Medicines Agency (EMA) and the European Centre for Disease Prevention and Control (ECDC).***

- *Art. 94.2.i* ***Assisting actively in the diagnosis of outbreaks in Member States of foodborne, zoonotic or animal diseases, or of pests of plants, by carrying out confirmatory diagnosis, characterisation and taxonomic or epizootic studies on pathogen isolates or pest specimens.***

Sub-activity 3.1 Technical and scientific assistance to the Commission

Technical support to DG-SANTE for the evaluation or re-evaluation of pesticides (e.g. within the framework of Art.12 of Reg. 396/2005) - This task includes experimental work

Objectives: Provide assistance and technical support to DG-SANTE and EFSA (on behalf of DG-SANTE) on all aspects related to the (re-)evaluation of pesticides. Where necessary, conduct experiments to assess the analytical behaviour of pesticides.

Background: The evaluation and re-evaluation of pesticide MRLs and residue definitions is of high priority for DG-SANTE. The EURLs are frequently consulted to provide technical support in this respect. This may include the request for reasoned positions as regards LOQs and the analytical feasibility and specificity of residue definitions, the evaluation of background levels and other relevant aspects. *Re-evaluations according to Art.12 of Reg.396/2005 concern ca. 25 pesticides per year, but those may be re-processed multiple times under different requirements Within the framework of this activity the EURLs are typically consulted at 3 stages: a) during the completeness check period (by EFSA), b) after the release of the draft reasoned opinion (by EFSA), and c) prior and during the preparation of the regulation draft (by DG-SANTE). Following agreement with DG-SANTE* ***the EURL-SRM is coordinating the positions for all compounds re-evaluated under Art. 12 of Reg. 396/2005 at stages a) and b) and half of the compounds at stage c).*** *Due to the multiple processing of each "Art.12 compound", the total number of compounds to be processed in 2018 is difficult to predict. It is however expected to be ca. 50.*

Re-evaluations according to Art. 43 of Reg. 396/2005, assessments for new active substances (NAS) and the evaluation of substances within the framework of a renewal of approval procedure (Art12 Reg. 844/2012/EC) concern a smaller number of pesticides. Ca. 20-25 compounds are expected to be

processed in 2018 altogether. Also here ***the EURL-SRM is coordinating the positions of the EURLs*** *for submission to DG-SANTE or EFSA.*
In most cases the evaluation by the EURLs involves the conduction of analytical experiments to check, the amenability of the compounds and residue definitions to multiresidue methods as well as the general analytical behaviour of the compounds during extraction and chromatographic separation. Where the available validation data is not sufficient, basic validation experiments are conducted and achievable consensus LOQs are estimated, always taking into account the proposed residue definition and the capabilities of OfLs.
Based on the experiences acquired in pesticide evaluations from 2013 to 2017, a considerable number of residue definitions concerns compounds requiring single residue methods or modified multiresidue methods. This is either because of the analytical properties of individual compounds within the residue definitions (parents or metabolites) or because the residue definitions require analysis via a common moiety.

Description: Circa 50 pesticides will be expectedly reviewed according to Art. 12 of Reg. 396/2005. Re-evaluation according to Art. 43 of Reg. 396/2005, NAS, and re-evaluations within the renewal of approval *(Art12 Reg. 844/2012/EC)* will expectedly concern another ca. 20-25 compounds. The EURL will take over the coordinating role in evaluation these compounds as agreed with DG-SANTE. In most cases, the evaluation will expectedly involve the conduction of analytical experiments to check, amenability to multiresidue methods and analytical behaviour in general. In some cases modifications of the QuEChERS method or single residue methods may need to be introduced. Where validation data do not exist or are not sufficient, validation experiments will be conducted to determine achievable LOQs. Necessary standards of pesticides or metabolites will be purchased and should these not be available, they will be requested from applicants. Where analytical standards are not available this is reported. The expected effort for Art.12 experiments is listed below:

Estimated man-days for experiments (Art. 12):

Type of compound	Expected No. of compounds	Lab activities involved				
		NONE	SOME	EXTENSIVE	VERY EXTENSIVE	Sum (Working days)
Estimated man-days for 10 compounds (avg)		*0*	*15*	*25*	*80*	
requiring NO Lab Activities	25					0
requiring SOME Lab Activities*	10		15			15
requiring EXTENSIVE Lab Activities**	10			25		25
requiring VERY EXTENSIVE Lab Activities***	5				40	40
					SUM	80

* e.g. for analytes requiring minor modifications of MRM-methods with few matrix groups being involved
** e.g. for analytes requiring minor modifications of MRM-methods with many matrix groups being involved OR non-MRM amenable analytes (parent or metabolites) with few matrix groups being involved
*** e.g. for challenging non-MRM-amenable analytes (parent or metabolites), with many matrix groups being involved

Support DG-SANTE on aspects related to monitoring activities

Objectives: Provide technical assistance to DG-SANTE in drafting the MACP regulation and the monitoring working document and in providing an overview of the available methods.

Description: Technical assistance will be provided to DG-SANTE where this is requested. This may involve the following: a) checking amenability of compounds with multiresidue methods and the availability of analytical standards in the market, b) participation in discussion meetings (e.g. in Brussels); c) preparation of a new Pesticide Ranking List (PeRL) following collection and evaluation of the necessary data; d) revision of documents; e) Communication with DG-SANTE and other stakeholders; f) update of the Method Finder List; g) a survey among all NRLs and OfLs in the network in order to find out which compounds within the MACP working document are routinely covered by the laboratories.

Revision of QA/QC-Document:
Objectives: Provide laboratories involved in official controls performance criteria to assess their methods and a guidance on how to properly conduct pesticide analysis.
Background: The guidance document ("Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed"). on analytical quality control is updated on a biannual basis. Following agreement by the EURLs this activity is coordinated by EURL-FV in collaboration with Tuija Pihlström (Sweden) and is assisted of an Advisory Group consisting of experienced experts.
Description: Jointly with the other EURLs the EURL-SRM will start activities towards revising the document SANTE/11813/2017. The next version of the document is due towards the end of 2019, but consultations within the AQC advisory group and with NRLs will already start in 2018. The activity may involve the conduction of a group work among the NRLs during the joint workshop in Almería, and a mission to attend coordination meeting of the AQC-working group.

Sub-activity 3.2 *Collaboration with European and international organisations (EFSA, CEN, ISO, …) and Third Countries (h)*

Technical and scientific support to EFSA
Objectives: Provide technical assistance to EFSA in order to facilitate evaluation of pesticides, drafting of reasoned opinions, monitoring coordination and any other aspect requested.
Description: The technical support to EFSA may include the following activities:
a) Assistance for the (re-)evaluation of pesticides according to Art12 and Art43 of Reg 396/2005 and *Art12 Reg. 844/2012/EC* (see Sub-activity 3.1);
b) Assistance as regards its activities relating to pesticide monitoring such as the revision of documents the provision of information on analytical aspects, the classification of residue definitions and the assistance in the interpretation or results. This activity may include participation in one or more meetings of the Networking Group on Pesticide Monitoring (in Parma)

Collaboration with Standardization bodies
Objectives: Pursue the standardization of methods
Description: This activity will include active involvement in the activities of the pesticide residue group of the CEN (European Standardization Body) and DIN (German Standardization Body) as well as of the German group for the establishment of official methods.

Sub-activity 3.3 Participation in symposiums, workshops and seminars for the dissemination of scientific information.

Participation in International Workshops
Objectives: Present results of EURL-activities, interact with the community and collect information, in order to stay updated about the developments in the field
Description: This activity may involve participation in various international conferences and workshops upon invitation, e.g. at the EPRW 2018 in Munich (Germany)

4 REAGENTS AND REFERENCE COLLECTIONS

Please, provided activities related to Regulation (EU) 2017/625:
(Number of Sub-activity boxes can be adjusted by EURL)

- *Art. 94.2.*j ***Coordinating or performing tests for the verification of the quality of reagents and lots of reagents used for the diagnosis of foodborne, zoonotic or animal diseases and pests of plants.***

- *Art. 94.2.k* ***Where relevant for their area of competence, establishing and maintaining:***
  - ***i. reference collections of pests of plants and/or reference strains of pathogenic agents;***
  - ***ii. reference collections of materials intended to come into contact with food used to calibrate analytical equipment and provide samples thereof to national reference laboratories;***
  - ***iii. up-to-date lists of available reference substances and reagents and of manufacturers and suppliers of such substances and reagents.***

Sub-activity 4.1 Up to date lists of available reference substances and reagents and of manufacturers and suppliers of such substances and reagents

List of Suppliers of Isotopically Labeled Internal Standards

Objectives: Facilitate the retrieval of isotope labelled standards by the laboratories and thus promote the use of isotope labelled internal standards

Description: A list with manufacturers of isotopically labeled internal standards for selected compounds will be published at the EURL Website. The list will cover the compounds analyzed by the QuPPe methodology, compounds within the MACP regulation and working document as well as compounds for which methods have been published by the EURL.

Background: Isotopically Labeled Internal Standards (ILISs) are analogues of the native compounds in which one or more atoms are exchanged by stable isotope analogues such as (13C, 15N, 2H, 18O). They have nearly identical chemical and physical properties to the unlabeled analyte. So far available, these ILISs are added directly to the test portion at the beginning of the procedure to compensate for any factors having an influence on the recovery-rates such as volume-deviations, analyte losses during partitioning, as well as matrix-effects during measurement. This can helps to simplify analytical procedures by obviating the need for high recoveries or extensive cleanup procedures. ILISs furthermore help to reduce variability of measurement. The quantification of QuPPe-analytes is in most cases performed with the help of isotopically labelled analogues of the target analytes.

List of suppliers of Analytical Standards

Objectives: Facilitate the retrieval of analytical standards of compounds that were identified in recent past as not being available in the market
Description: The EURL-SRM will seek the collaboration with the other 3 EURLs on pesticides for the construction of a common list stating the commercial sources of analytical standards for compounds identified at some point in the recent past (e.g. if this is stated in the MRL-Website) that they are not available in the market. The websites of various manufacturers/suppliers for these analytical standards will be periodically checked for updating the list of analytical standards.

5 REQUIREMENTS RELATED TO OTHER LEGISLATION

Please specify applicable legislation:
(Number of Sub-activity boxes can be adjusted)

Sub-activity 5.1 *(name of Sub-activity)*

Objectives:
Description:
Expected Output:
Duration:
Budget:

REMARKS

(if necessary)