

# EURL-AO survey on analytical capabilities and possible conclusions on further strategies



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## Introduction

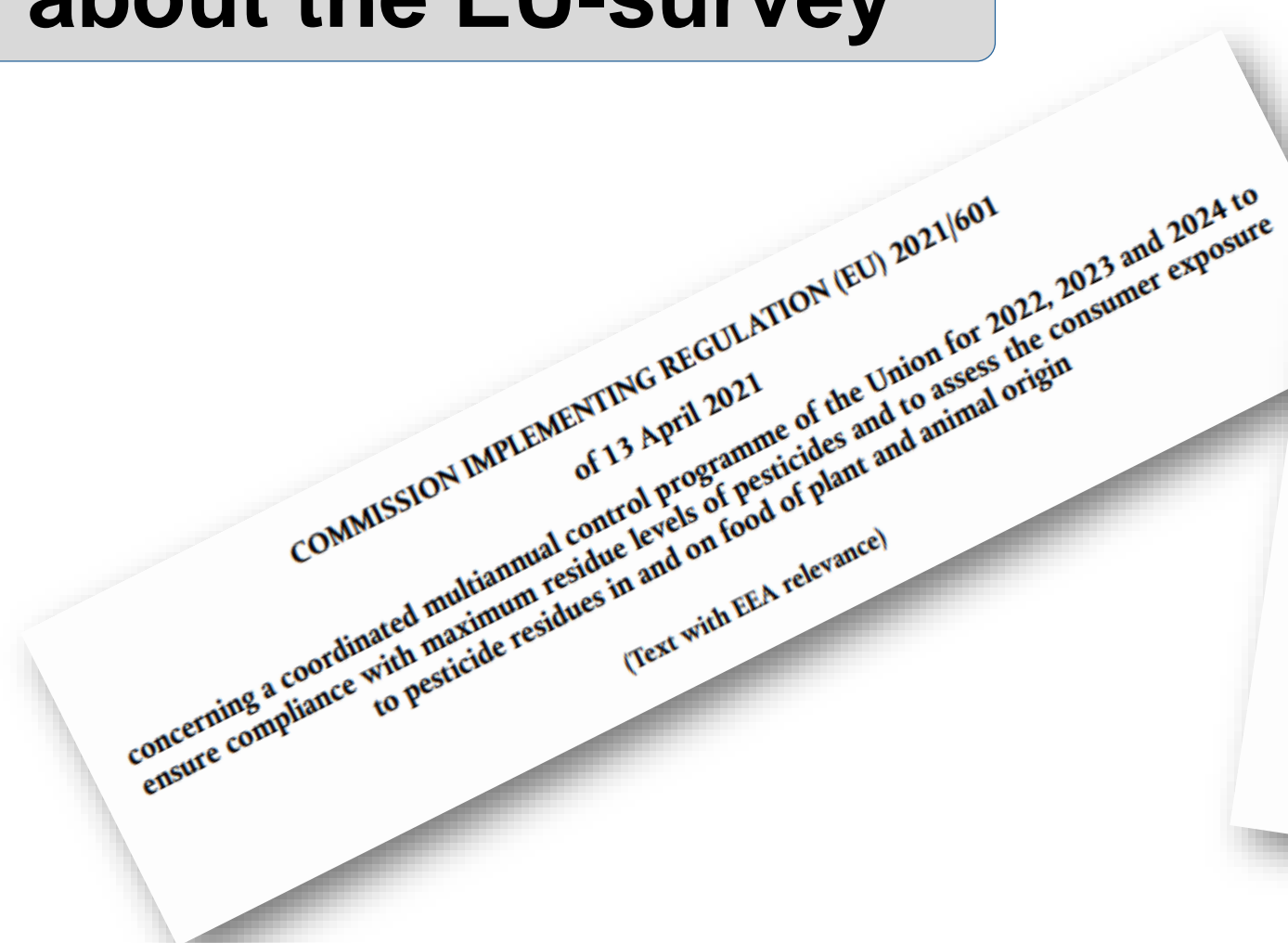
The European Reference Laboratories (EURLs) for pesticide residues annually conduct an online survey on the capability of analysis of pesticides and its metabolites in food on request of the European Commission (COM).

The results of the survey are used by COM within the process of updating the "Working document on pesticides to be considered for inclusion in the national control programmes to ensure compliance with maximum residue levels of pesticides residues in and on food of plant and animal origin" [1]. The Working Document is a non-binding document that gives recommendations to gather (on a voluntary basis) monitoring data on pesticides that could be considered for potential inclusion in the coordinated multiannual control programme of the EU (MACP) [2].

With this survey the EURL-AO/EURL-SRM and COM aim to find out how many labs have analytical methods in place and how many of them have the capability to routinely analyse for the pesticides included in Chapter 4 of the Working Document. In addition, it is of interest to see how many labs cover the full residue definition and how many cover only parts of the residue definition.

## General information about the EU-survey

When?	August – October 2021
Who participated?	NRLs and OFLs
What was evaluated?	Pesticides listed in the working document [1] and MACP [2]
Sample scope	Food of animal origin (except honey)
Number of participating labs	92
Number of compounds evaluated	229



## Outcome of the EU-survey

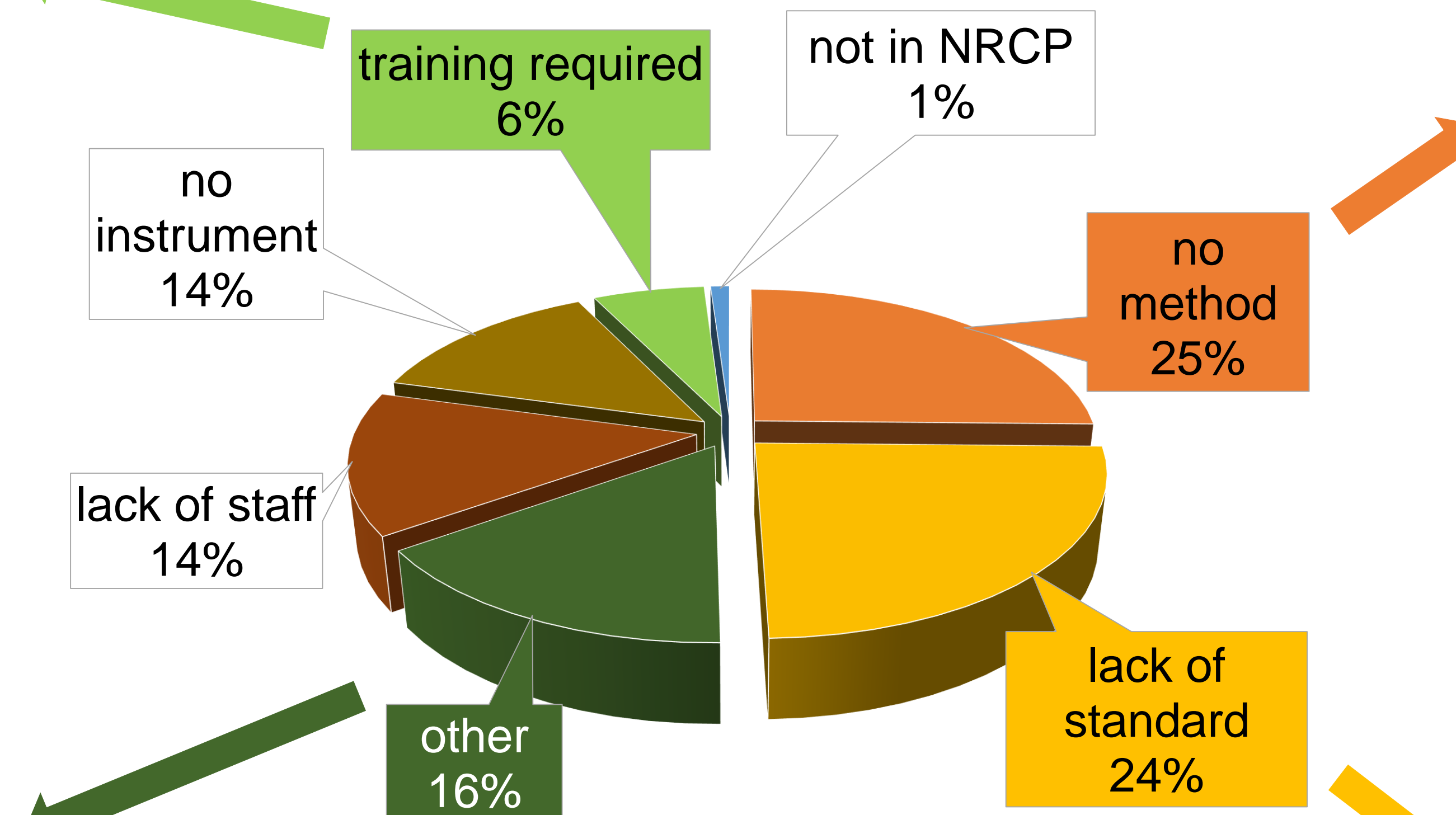
### Most selected compounds for which labs indicated that a training is required

- Didecyldimethylammonium chloride (DDAC) C8, C10, C12
- Benzalkonium chloride (BAC) C8-C18
  - Topramezone
  - Fenthion + metabolites
  - Fipronil + fipronil sulfone
  - Tau-fluvalinate
- Glyphosate (sum of glyphosate, AMPA and N-acetylglyphosate) and glufosinate

### Other reasons for which specific pesticides are not routinely analysed

- isomers → only sum
- not (fully) validated
- poor performance in food of animal origin
  - not demanded by client
  - not responsible
- analysed upon request

### Reasons for not analysing specific pesticides listed in the working document and/or MACP



What could the EURL AO do to help for improvement?	Answers	Ratio
provide analytical neat standards	19	20.21 %
provide analytical standard mixtures	25	26.60 %
provide standards in solvent	14	14.89 %
provide standards in matrix/matrices	14	14.89 %
provide training	31	32.98 %
provide methods	53	56.38 %
provide a PT with selected pesticides and metabolites	24	25.53 %
other, please specify	19	20.21 %
No Answer	0	0.00 %

### Compounds for which more than 10 labs indicated that no method is available in the lab

- Prothioconazole-desthio (sum; following hydrolysis)
- Boscalid-5-hydroxy (following hydrolysis to include conjugates)
- Carbendazim (sum; following conversion of thiophanate methyl to CBZ)
  - Aminocyclopyrachlor
- Glyphosate (sum of glyphosate, AMPA and N-acetylglyphosate)
  - Fenpropimorph carboxylic acid
- 4'-Hydroxychlorpropham-O-sulphonic acid (4-HSA)
  - Spiroxamine carboxylic acid
- Didecyldimethylammonium chloride (DDAC) C8, C10, C12
  - Fluopyram-benzamide

### Compounds for which more than 10 labs indicated that no standard is available in the lab

- Spiroxamine carboxylic acid
- 4'-Hydroxychlorpropham-O-sulphonic acid (4-HSA)
  - Aminocyclopyrachlor
- Fenpropimorph carboxylic acid
- Boscalid-5-hydroxy (M510F01)
  - Indoxacarb, R-isomer
  - Bixafen, Desmethyl-
  - Metaflumizone (E- and Z-isomer)
- Didecyldimethylammonium chloride (DDAC) C8, C10, C12
  - Permethrin, cis-/trans-

## Conclusion

- most of the compounds which are difficult to be analysed by NRLs and OFLs are **single residue method compounds** (e.g. metabolites of pesticides, separation of isomers, highly polar pesticides)
- usually a **combination of multiple factors** (e.g. lack of staff and no instrument) is the reason why specific compounds are not routinely analysed
- What will the EURL-AO do to further support labs?
  - standards: the EURL aims to provide analytical standards for analytes which are very expensive (e.g. liquid aliquots, isotope-labelled standards) or problematic as regards stability
  - methods: the EURL is working on the development of new methods and tries to simplify and automatise existing methods

## References

[1] European Commission, Working document on pesticides to be considered for inclusion in the national control programmes to ensure compliance with maximum residue levels of pesticides residues in and on food of plant and animal origin. [https://ec.europa.eu/food/system/files/2021-12/pesticides\\_mrl\\_guidelines\\_wrkdoc\\_12745.pdf](https://ec.europa.eu/food/system/files/2021-12/pesticides_mrl_guidelines_wrkdoc_12745.pdf)

[2] European Commission, Commission Implementing Regulation (EU) 2021/601 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0601&from=EN>