



JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PESTICIDE RESIDUES

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DISCUSSION PAPER ON THE REVIEW OF MASS SPECTROMETRY PROVISIONS IN THE GUIDELINES ON THE USE OF MASS SPECTROMETRY FOR THE IDENTIFICATION, CONFIRMATION AND QUANTITATIVE DETERMINATION OF PESTICIDE RESIDUES (CXG 56-2005) AND THE GUIDELINES ON PERFORMANCE CRITERIA FOR METHODS OF ANALYSIS FOR THE DETERMINATION OF PESTICIDE RESIDUES IN FOOD AND FEED (CXG 90-2017)

(Prepared by the Electronic Working Group chaired by Islamic Republic of Iran and co-chaired by Costa Rica)

Background

1. At CCPR50 (2018), Iran presented a proposal for new work on the revision of CXG56 and highlighted the gaps in the Guidelines that required addressing e.g. the title does not match the content of the Guidelines; the Guidelines focuses on confirmation test only; CXG covers mass spectrometry in general which requires more detail guidance; apparent editorial mistakes in the text; etc. CCPR acknowledged the relevance of the issue and agreed that a discussion paper could look into this need to revise CXG56 and their harmonization with CXG90 and other relevant Codex documents.¹
2. At CCPR51 (2019), considered the proposal on exploring the possibility to merge CXG56 and CXG90 into one single document, and if feasible and appropriate, to proceed with the withdrawal of CXG56. The Committee noted general support for the proposal. It was also noted that CXG90 was developed recently and covers not only mass spectrometry (MS) but also other modern techniques for the determination of pesticide residues while taking into account the needs and capacities of developing countries. This spirit should be maintained when considering the possible merging of the two guidelines to avoid overlapping of documents. The first step would so be to explore whether the provisions on MS in CXG90 are sufficient to meet the needs of members and to examine the need and room for improvement CXG90, if appropriate by taking into account relevant information from CXG56.
3. CCPR51 thus agreed to re-establish the Electronic Working Group (EWG), chaired by Iran and co-chaired by Costa Rica with the following Terms of Reference (TOR):
 - (i) To determine if CXG90 adequately covers mass spectrometry and if so, to propose revocation of CXG56.
 - (ii) If there are provisions from CXG56 that could be relevant but not included in CXG90, to look into the feasibility to merge the two documents and
 - if appropriate to present a proposal for new work, and
 - if possible to present an outline of the merged Guidelines for consideration at CCPR52.²

Introduction

4. Human exposure to pesticides and their metabolites is an issue of worldwide public concern because of the risk imposed to human health. Worldwide, the legislative framework is becoming more demanding for the authorization of pesticides, for the establishment of the maximum residue limits (MRLs), and for the monitoring of pesticide residues in food of plant and animal origin.

¹ REP18/PR, paras. 164-166.

² REP19/PR, paras. 180-181, 185

5. Mass spectroscopy as an accurate and highly flexible technology that is capable of measuring residues at very low levels and provide unequivocal evidence of the identity and magnitude of any residue detected, has been used for many years in the identification and quantification of pesticide residues.
6. The *Guidelines on the use of mass spectrometry for identification, confirmation and quantitative determination of residues* were adopted by the Codex Alimentarius Commission (CAC) in 2015. However, since then there have been many improvements in MS and separation techniques, liquid chromatography (LC) and gas chromatography (GC) that are often used with MS which are not included in CXG56.
7. On the other hand, the *Guidelines on performance criteria for methods of analysis for the determination of pesticide residues in food and feed* were adopted by the Commission in 2017 which includes criteria for the use of mass spectrometry in identification and confirmation of pesticide residues.
8. The EWG considered paragraphs 6-7 considering the mandate given by CCPR52 in paragraph 3 as shown below.

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9. The EWG worked through an online platform. Two drafts were provided for comments and one Questionnaire.
10. The EWG was joined by 20 Member Countries, 1 Member Organization, and 5 observers. The list of participants is provided in Appendix I.
11. Comments were received from 7 member countries³ and 1 observer organization⁴.

Discussion

12. Considering that CXG 90 was developed recently and covers not only MS, but also other modern techniques for the determination of pesticide residues and the CCPR policy of avoiding overlapping of documents, it is recommended to withdraw CXG56.
13. A questionnaire was prepared and distributed to the EWG members, with general questions about the adequate coverage of the CXG90 on MS. According to the replies to the questionnaire there was no consensus on the need to make any changes to CXG90.
14. Iran as Chair and Costa Rica as co-Chair of the EWG are looking forward for any recommendation and decision made by CCPR52 on this Guideline.

Conclusion

15. Considering the information gathered and discussion held in the EWG, there was not a complete analysis of TOR(i) that would enable the EWG to pursue TOR(ii) following revocation of CXG56. Therefore, the EWG might need to further discuss TOR(i) as there is not yet consensus on the need to address TOR(ii).

Recommendation

16. CCPR is invited to consider the re-establishment of the EWG to continue work on TORs(i)-(ii) as described in paragraph 3 in order to find common grounds to whether TOR(i) adequately addresses the issue at hand or whether there is a need to proceed to addressing TOR(ii).

³ Australia, Canada, Chile, Japan, Thailand, United State of America and Uruguay

⁴ AgroCare

APPENDIX I**LIST OF PARTICIPANTS****Chair****Islamic Republic of Iran**

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