



ANALYSIS OF AGENDA ITEMS IN PREPARATION FOR THE 53rd SESSION OF THE CODEX COMMITTEE ON PESTICIDE RESIDUES

4th – 8th and 13th JULY 2022 - Virtual Meeting

AGENDA ITEM 15

Discussion paper on monitoring the purity and stability of certified reference material of pesticides during prolonged storage

Objectives

This document offers a review and analysis of the agenda items planned for discussion at the 53rd session of the **Codex Committee on Pesticide Residues (CCPR)**, scheduled to take place virtually July 4th – 8th and 13th, 2022. This document is intended for possible use by the Codex communities of practice, promoted by [GForSS](#) and [PARERA](#), as part of their contribution to enhancing awareness and supporting effective participation in international food standard setting meetings (Codex meetings) by representatives from members and observers.

The analysis provided in this document offers a factual review of agenda items, their background and a discussion of some considerations. This analysis is indicative in nature and does not represent an official position of the organizations mentioned above ([PARERA](#) and [GForSS](#)), their membership or their management. It provides a synthesis and analysis of the work currently under discussion by the CCPR, which may be useful for delegations from Arab countries to prepare their positions taking into account the needs and specificity of the region and the potential impact of the proposed food standards.

This analysis is prepared as part of the **Codex Initiative for the Arab Region: Arab Codex Initiative**, implemented by [PARERA](#) and [GForSS](#), hosted and coordinated by the [Arab Industrial Development, Standardization and Mining Organization \(AIDSMO\)](#) and funded by the US Codex Office, US Department of Agriculture.

The focus of the analysis of agenda item 15 of CCPR53, relates to the **monitoring of the purity and stability of certified reference material (CRMs) of multi-class pesticides during prolonged storage**.

**It is important to note that experts – members of the Arab Expert Working Group – do not represent the organizations and / or jurisdictions to which they are affiliated. The selection and participation in the Arab Expert Working Group proceedings is based on each expert's own credentials and experience, which should not be misconstrued as the country's / delegation's / organization's position to which they belong.*

Agenda Item 15

Document

CX/PR 22/53/17

CCPR53 is invited to consider the proposal for new work on guidelines for monitoring the purity and stability of certified reference materials during prolonged storage, provided in appendix I of working document CX/PR 22/53/17.

Background

CCPR51 (2019) agreed to initiate the development of a discussion paper on “Monitoring the Purity and Stability of CRMs of Pesticides during Prolonged Storage”, for the harmonization of concepts and criteria enabling the recognition of the expired/expiring CRMs with valid purity and stability, for extending their use in analysis of multi-class pesticides, and pesticide residues in different food commodities and the environment (soil, air, water) samples.

During CCPR52 (2021), several members endorsed this work, emphasizing on its importance in terms of criteria harmonization amongst regulatory agencies regarding the use of CRMs beyond the expiry date and its advantages concerning the reduction of laboratory costs. CCPR52 agreed thus to establish an electronic working group (EWG) chaired by India, and co-chaired by Argentina and Iran, to further develop the discussion paper while considering the needs, feasibility and relevance and that by developing harmonized guidelines/analytical protocol on the monitoring of purity and stability of CRMs and stock solutions of multi-class pesticides during prolonged storage, including intermediate and working standards.

In its 53rd session, CCPR is therefore invited to consider the proposal for new work on guidelines for monitoring the purity and stability of certified reference materials during prolonged storage.

Subject to approval by the Codex Alimentarius Commission (CAC45), the Guidelines will be considered at CCPR54 (2023) and should be finalized for adoption by CAC in 2025 or earlier.

Analysis

An accurate and precise analysis of multi-class pesticides requires the reliance on **Certified Reference Materials** (CRMs) of known chemical purity and stability. The CRMs are required for purity assessment and accurate qualitative and quantitative analysis (trueness and/or precision) of pesticide residues in food commodities.

A CRM is a specific class of reference materials (RM) whose property values (purity, concentration, etc.) are established and certified in accordance with metrological principles using international best practice protocols established as per ISO Guidelines.

Commercial suppliers of pesticide standards sell CRMs with 2,3 or 5 years’ short-term expiry dates. This forces laboratories to buy new standards and prepare stock solutions more frequently than strictly necessary. This leads to insurmountable extra work, especially for compounds for which stability is normally not questionable, increases laboratory costs and hinders implementation of Codex standards and guidelines. Moreover, a long time shipping is required so that CRMs reach laboratories in developing countries, which leads these laboratories to receive these materials close to their expiry date.

Additionally, it has been observed that several stable CRMs continue to retain their valid stability and purity as per Certificate of Analysis (CoA) even after expiry, and therefore remain entitled for continuous use as CRMs up to 3 years after expiry.



The new proposed work will aim to develop guidelines on this matter, covering all requirements that will eventually ensure a confirmed use of CRMs after their expiry dates:

- ❖ Effective storage methods needed to ensure the stability and purity of CRMs within and beyond their expiry date and protecting them from the impact of temperature, light, oxygen, humidity and other degradation inducing factors.
- ❖ Re-certification or re-verification of expired CRMs in terms of purity and stability, enabling their continued use for analytical purposes.

Conclusion and recommendations

The proposed new work respects requirements in terms of relevance and timeliness and includes a clear assessment, positioning it well against the “Criteria for the Establishment of Work Priorities”. Moreover, this matter is of utmost importance for food control laboratories in the Arab region, where the development and adoption of such guidelines can greatly decrease their laboratory costs.

Arab Codex delegations are therefore invited to support the proposal of a new work on the development of guidelines for monitoring the purity and stability of certified reference materials during prolonged storage and the outline as proposed in appendix III, and recommend the adoption of this new work by CAC45.

