

# CODEX ALIMENTARIUS COMMISSION



Food and Agriculture  
Organization of the  
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World Health  
Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - E-mail: [codex@fao.org](mailto:codex@fao.org) - [www.codexalimentarius.org](http://www.codexalimentarius.org)

Agenda Items 16

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## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON CONTAMINANTS IN FOODS

#### 16th Session

18-21 April 2023 (physical plenary meeting)

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### REPORT OF THE VIRTUAL WORKING GROUP ON PRIORITY LIST OF CONTAMINANTS AND NATURALLY OCCURRING TOXICANTS PROPOSED FOR EVALUATION BY JECFA

#### 1. Introduction

The virtual working group (VWG) was held on 11 and 12 April 2023 and chaired by Dr. Lauren Posnick Robin (United States). Dr. Eileen Abt (United States) served as Rapporteur. Dr. Markus Lipp (FAO/JECFA Secretariat), Dr. Kim Petersen (WHO/JECFA Secretariat), and Dr. Moez Sanaa (WHO/JECFA Secretariat) assisted the Chair.

Dr. Robin provided background on the discussions at CCCF15, presented a summary of comments received in reply to CL 2022/84-CF, reviewed updates to current items on the priority list, reviewed new items proposed for the priority list, and presented recommendations for CCCF16, including changes to the priority list.

#### 2. Current Priority List

The current priority list (REP22/CF) reviewed at the VWG includes: 1) dioxins and dioxin-like PCBs, 2) arsenic (inorganic and organic), and 3) scopoletin.

Based on responses to a Circular Letter request (CL 2022/84-CF) and discussion during the VWG, the VWG reviewed status updates to items currently on the priority list.

The following updates were made to items currently on the priority list (Appendix 1): for arsenic (inorganic and organic) additional occurrence data were provided and information that was not relevant was removed.

#### 3. New Proposals for Priority List

Based on responses to CL 2022/84-CF, the VWG recommended that thallium, proposed by the United States (USA), and perfluoroalkyl substances (PFAS) (e.g., PFOS, PFOA, PFNA, and PFHxS), proposed by Singapore, be added to the priority list for full evaluation (toxicological assessment and exposure assessment). The EU, New Zealand, and USA reported data on thallium. The EU, Japan, Singapore, and the USA reported data on PFAS.

Indonesia proposed addition of ethylene oxide (EtO) and 2-chloroethanol (2-CE) to the priority list, noting that EtO and 2-CE can result from use as a fumigant pesticide, from use of food additives where EtO is an impurity, or potentially from environmental releases. Also, EtO has become a trade issue with varying national regulatory frameworks. The Chair noted there are questions about whether EtO should be viewed as a contaminant, pesticide, or impurity in a food additive and how to proceed and therefore consultation would be helpful.

As such the VWG recommended that Indonesia's proposal for addition of ethylene oxide (EtO) and 2-chloroethanol (2-CE) to the priority list be deferred for consideration until next year in order to request input from the Codex Committee on Pesticide Residues (CCPR), including whether EtO meets the definition of a pesticide under Codex, and if not, whether some coordination with regards to the risk assessment would be required between JMPR and JECFA to evaluate this compound as a contaminant. The VWG also recommended that CCFA be informed of CCCF decisions, as EtO can potentially be found as an impurity in certain food additives.

#### **4. Other matters**

The Chair commented that the WHO expert consultation to re-evaluate the 2005 toxic equivalency factors (TEFs) for dioxin was held in October 2022 and the outcome of this consultation will be published by WHO in 2023.

#### **5. Recommendation to the Committee**

CCCF16 should consider including the contaminants and naturally occurring toxicants identified in the table below on the priority list of contaminants and naturally occurring toxicants proposed for evaluation by JECFA.

## ANNEX

1 PRIORITY LIST OF CONTAMINANTS FOR EVALUATION BY JECFA (REP22/CF)

Contaminants	Background and question(s) to be answered	Data availability (when, what)	Proposed by
Dioxins and dioxin-like PCBs	Full evaluation (toxicological assessment and exposure assessment) to update 2001 JECFA assessment and incorporate data on developmental effects from in utero exposures.	<p><u>EFSA</u>: Assessment available September 2018</p> <p><u>WHO</u>: Expert consultation to develop TEFs held in October 2022; report expected in 2023.</p> <p><u>Brazil</u>: Occurrence data on milk, raw eggs, fish, and fat (poultry and mammals)</p> <p><u>Canada</u>: Occurrence data on foods of animal origin</p>	Canada
Arsenic (inorganic and organic)	<p><u>Inorganic</u>: 2011 JECFA evaluation based on cancer effects. This evaluation would focus on non-cancer effects (neurodevelopmental, immunological and cardiovascular) and could inform future risk management needs.</p> <p><u>NOTE</u>: Needs to be put in context to cancer risk assessment.</p> <p><u>Organic</u>: (exploratory)</p>	<p><u>Australia/New Zealand</u>: Total diet study; inorganic arsenic occurrence data in rice</p> <p><u>Brazil</u>: Occurrence data on total arsenic in rice, poultry, pork, fish, and cattle meat, inorganic arsenic occurrence data in rice</p> <p><u>Canada</u>: Occurrence data on inorganic and total arsenic in a variety of commercial foods.</p> <p><u>Chile</u>: Occurrence data on inorganic and total arsenic in algae, crustaceans, gastropods, bivalve molluscs and small fish.</p> <p><u>EU</u>: Inorganic arsenic occurrence data</p> <p><u>India</u>: Occurrence data in rice</p> <p><u>Japan and China</u>: Occurrence data on rice and rice products</p> <p><u>New Zealand</u>: Inorganic arsenic occurrence data in seafood</p>	USA

Contaminants	Background and question(s) to be answered	Data availability (when, what)	Proposed by
		<p><u>Turkey</u>: Occurrence data in rice</p> <p><u>USA</u>: Occurrence data on rice cereals, and rice and non-rice products; 2016 risk assessment.</p> <p><u>USA</u>: Studies:</p> <ul style="list-style-type: none"> <li>• Neurodevelopmental studies of inorganic arsenic impacts on rat behavior (2019, 2022)</li> <li>• Toxicokinetic studies on metabolism and disposition of inorganic and organic arsenic and metabolites in mice (various life stages) (2018-20)</li> <li>• Developmental toxicity test in <i>C. elegans</i> on inorganic arsenic (2018) and ongoing study on organic arsenic.</li> <li>• Non-governmental report, Effects of Inorganic Arsenic in Infant Rice Cereal on Children's Neurodevelopment (2017)</li> </ul>	
Scopoletin	Full evaluation (toxicological assessment and exposure assessment) in fermented noni juice	<p>CCNASWP still working on standard for noni juice and data availability, to be discussed at CCCNASWP16 (2023). CCNASWP15 agreed to request CCCF to retain scopoletin on the priority list and to call upon Codex members to generate and submit data to support the conduct of the safety evaluation by JECFA. CCNASWP15 also requested FAO and WHO to organize a new call for data for the safety evaluation of scopoletin. FAO reminded that a full dataset including exposure and toxicity is required.</p> <p>A consultant was hired by the Codex Secretariat to undertake a toxicological review of scopoletin as presented in the Annex to CX/CF 21/14/2-Add.1.</p>	CCNASWP
Thallium	Full evaluation (toxicological assessment and exposure assessment)	<u>EU</u> : Two EFSA assessments, occurrence data	United States

Contaminants	Background and question(s) to be answered	Data availability (when, what)	Proposed by
		<p><u>New Zealand</u>: Total Diet Study data</p> <p><u>USA</u>: Occurrence data on brassica-containing foods, in baby foods, and in Total Diet Study results. U.S. National Toxicology Program is conducting studies on thallium (I) sulfate.</p>	
Perfluoroalkyl substances (e.g., PFOS, PFOA, PFNA, PFHxS)	Full evaluation (toxicological assessment and exposure assessment)	<p><u>EU</u>: Occurrence data</p> <p><u>Japan</u>: Occurrence data</p> <p><u>Singapore</u>: Occurrence data</p> <p><u>USA</u>: Occurrence data from FDA Total Diet Study and targeted surveys (seafood, bottled water, and milk). Occurrence data in meat and poultry from the USDA National Residue Program. Toxicology/risk assessments from the US Agency for Toxic Substances Disease Registry and Environmental Protection Agency.</p>	Singapore