

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD
HEALTH
ORGANIZATION



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Agenda Item 17 (h)

**CX/FAC 05/37/34-Add. 1
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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FOOD ADDITIVES AND CONTAMINANTS**

Thirty-seventh Session

The Hague, the Netherlands, 25 – 29 April 2005

**DISCUSSION PAPER ON POLYCYCLIC AROMATIC HYDROCARBONS (PAH)
CONTAMINATION**

COMMENTS

The following comments have been received from: Cuba, Japan, Spain, USA and Venezuela

CUBA:

In our opinion the document provides very valuable information and we have no new comments concerning it.

JAPAN:

Japan recognizes that it is important for the CCFAC to take necessary actions, such as elaborating a Code of practice, to reduce contamination of foods with polycyclic aromatic hydrocarbons (PAH) during food processing. Japan is planning to start surveillance of PAH in food in 2005, the results of which will be provided to the CCFAC in due course and as necessary. Japan agrees with development of a Code of Good Manufacturing Practice (GMP) in order to reduce the concentration of PAH in processed foods. However, the Code should reflect the current food processing practices in various parts of the world and the analytical data on PAH.

SPAIN:

Spain has examined the "Discussion paper on PAH contamination" elaborated by Denmark and agrees in general with the document. We think it is a good working document and includes the main issues related to PAHs in foods. However we would like to make the following comments:

General comment

We would like that the literature references were included as a food note in the paragraphs where they had been used, e.g.: paragraphs 10, 13, 20, 21.

Paragraph 4

The scope of the discussion paper is restricted to cover contamination of food with PAH from processing and does not cover the contribution from environmental contamination. However Annex I includes the sources of environmental PAH contamination.

We think it would be better to delete Annex I because its information is excluded of the scope of the Codex document.

Paragraph 8

This paragraph includes the PAH formed during processing and domestic food preparation. In the following paragraphs (11-20) are explained with some detail the processing of “smoking”, “drying” and “barbecuing/grilling” but the processing “roasting”, “baking” y “frying” are not explained.

We think that the processing and domestic food preparation “roasting”, “baking” y “frying” should be explained like the others processing.

Paragraph 16.

This paragraph explains some procedures of direct drying.

We think it would be more clarifying to include the foods subjected to direct drying and that could contain PAH.

Barbecuing/grilling. Delete the number 6 in the title.

Paragraph 21

- First point. Figures of minimum and maximum contents of PAH in smoked fish should be included.
- Third point. In this point, the figures of PAH in vegetable oils are not included, despite of an explanation of contamination in vegetable oils is included. We think that the explanation should be included in the paragraph “Direct drying”, and data of PAH in vegetable oils (average and ranges) should be referred in this paragraph.

Paragraph 23

In this paragraph 33 PAH evaluated by the Scientific Committee on Food are included.

We think that it would be better to add a reference to Annex II.

Measures to reduce PAH contamination of foods and some risk management options

We think it would be better to include two sub-paragraphs, one for industries and another one for catering and consumers.

Paragraph 31

Selecting lean meat and fish. We think it would be better for consumers to indicate the name of the fatty fish in order to distinguish which fish must not be cooked in barbecued.

Paragraph 32.

“Broiling can significantly reduce PAH levels”.

We think it would be more clarifying to explain in the document why broiling reduce significantly PAH levels and to explain the difference between “broiling” and “barbecuing” because both words have the same meaning in the dictionaries.

USA:

This responds to CX/FAC 05/37/34, which requests comments on the Discussion Paper on Polycyclic Aromatic Hydrocarbons (PAHs) Contamination. The United States of America appreciates the opportunity to provide the following comments for consideration at the forthcoming 37th Session of the Codex Committee on Food Additives and Contaminants (CCFAC).

At the 36th Session of the CCFAC (Rotterdam, The Netherlands, 22-26 March 2004), the Committee agreed that the purpose of the discussion paper was to set out the issues concerning PAHs in foods, for circulation, comments, and consideration at its next Session.

General Comments

We offer the following general comments for consideration by the 37th CCFAC.

1. We recommend that more references be provided.
2. We believe that the discussion paper would benefit by the inclusion of a table of PAH levels in various foods, along with references and an explanation of the difference between citing individual and total PAH levels. For any cited PAH levels in the text, it should be made clear which level (individual or total) is being cited.
3. We note that the direct drying section does not mention PAHs. The connection between direct drying and PAH levels should be clearly stated. We recommend that this section should either be removed, or materials related to PAHs should be included, such as data on PAH levels in dried foods, information on how different drying processes affect PAH levels, and information on mechanisms of PAH formation in dried foods.
4. We recommend that the paper include more substantive discussion of:
 - a. Whether the risk from PAHs is sufficient to justify the potential impositions to the food industry and individual consumers of measures to reduce PAHs.
 - b. The balance between the toxicological safety concerns of PAHs with safety concerns from microbial contamination.

Specific comments

We offer the following specific comments for consideration by the 37th CCFAC.

Paragraph 4

- a. We recommend that the following sentence be added at the end of the paragraph: “More information on PAH contamination in the environment can be found in Annex I.”

Paragraph 6

- a. We recommend replacing “requirements” with “limits,” as this more accurately reflects the setting of Codex standards for contaminants in food.
- b. We recommend that a citation be provided for the referenced Codex meeting.

Paragraph 10

- a. We recommend that a citation for the referenced data be provided.

Paragraph 12

- a. We recommend that some data be provided on the range of PAH types and levels produced by smoking, along with appropriate references. If preferred, this information could be included in the section on PAH levels (Paragraph 21), with a reference to that paragraph here.

Paragraphs 15-18

- a. In our view, this section on direct drying is difficult to understand. Furthermore, this section does not make clear how direct drying is relevant to PAHs. We recommend that this section be rewritten to be clearer and to include a discussion on the relevance of direct drying in PAH formation, or it should be removed.

Paragraph 21

- a. It is not clear to us whether the figure 130 µg/kg refers to individual PAHs or total PAHs. We recommend that the text be revised to clarify this point.
- b. We recommend that the material on contamination of vegetable oils by direct-fire drying should be moved to a section on drying, as it is unrelated to levels of PAHs. Material on how to reduce PAH levels by refining processes can be moved to the Measures to Reduce Contamination section.
- c. We recommend that this paragraph (or section) should include an explanation of how PAHs are measured—individual and total levels—are toxic equivalents (TEQs) used, as with dioxins?

- d. We recommend that this section include a table with ranges of PAHs found in different types of food and for different processes (smoking, barbecuing, grilling, etc.), and include references.

Paragraph 24

- a. We recommend that there is a clear statement on whether the most genotoxic PAHs are those with a bay- or fjord region (Paragraph 23) or those with high molecular weight (Paragraph 24).

Paragraph 28

- a. Since this paragraph mentions avoiding direct contact with combustion products during drying, we recommend that it include a brief description of how direct contact is avoided and what is the proper and improper way to prepare the food.

Paragraph 36

- a. We recommend that this paragraph note that the use of smoke flavors does not provide the preservative/anti-microbial effect of actual smoking. There may be microbial food safety reasons for real smoking of products.

Options for Decisions

Paragraph 37

- a. We recommend that this paragraph note that consumer safety may also benefit from the antimicrobial properties of smoked and adequately cooked foods and that consumer safety is not based solely on reducing PAHs.

Paragraph 38

- a. We suggest revising paragraph 38 as follows, to provide background for our suggested additional options (see our comment on paragraph 39 below): "CCFAC should seek more information on the benefits and potential problems of reducing PAH contamination in food, including information on PAH toxicology, PAH levels in foods, alternative cooking methodologies, and the costs and benefits of adopting such modifications. CCFAC should also examine other Codex standards, e.g., for dried and smoked foods, to see if these standards already contain protections against PAHs."

Paragraph 39

- a. We recommend that the following two additional options be considered by the CCFAC:
 - a. Develop a more extensive discussion paper, including information from the JECFA evaluation in February 2005, information on microbiological hazards versus PAH hazards, and information on the costs and benefits of reducing PAHs.
 - b. Develop a general Code of Practice for reducing contamination of foods with PAHs (i.e., one that includes smoking, grilling, barbecuing, consumers, caterers, industry, etc.).
- b. We recommend that option 'f' from Paragraph 39 be addressed as a component of the next revision of the discussion paper, prior to development of a Code of Practice (see suggestions for Paragraph 38).

Paragraphs 40-41

- a. We recommend that these paragraphs be deleted.

VENEZUELA:

From the listing in paragraph 39, under the heading 'Options for decisions', some options: c., d. and e., should be given priority due to the scientific background relating to the formation of PAH in the direct drying processes, smoked products and barbecued products in the catering sector, and taking into account that the 'carcinogenic' level set by the European Union is 6µg/Kg because in smoked foods (fish and meat) levels have been obtained of 200µg/Kg; and in barbecued/grilled meat from 130 µg/Kg to 320µg/Kg.

Given that among consumers it is very common that food is grilled, Venezuela thinks it would be appropriate to work out a list with recommendations for consumers.