

# codex alimentarius commission

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FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD  
HEALTH  
ORGANIZATION



JOINT OFFICE: Viale delle Terme di Caracalla 00153 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

**Agenda Item 15**

**CX/CF 07/1/21**

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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX COMMITTEE ON CONTAMINANTS IN FOODS**

**First Session**

**Beijing, China, 16 - 20 April 2007**

**PRIORITY LIST OF CONTAMINANTS AND NATURALLY OCCURRING TOXICANTS  
PROPOSED FOR EVALUATION BY JECFA**

Comments by the United States of America in response to Circular Letter CL 2006/46-CF

**UNITED STATES OF AMERICA**

Below are comments in response to Circular Letter CL 2006/46-CF for addition of the following two substances: a) Furan, and b) Perchlorate, to the Priority List on the basis of Annex I (Criteria for the inclusion of contaminants and naturally occurring toxicants in the priority list) and Annex II (Information on the contaminant to be evaluated by JECFA).

**a) Furan**

**Information on Furan to be evaluated by JECFA**

1. Proposal for inclusion submitted by:  
The United States of America
2. Name of compound; chemical name(s):  
Chemical Name: Furan  
Other names: oxole, furfuran, divinyl oxide
3. Identification of (additional) data (toxicology, metabolism, occurrence, food consumption) which could be provided to JECFA:  
Toxicology/metabolism:  
<http://ntp.niehs.nih.gov/index.cfm?objectid=07143157-B8C3-0720-76E77C61CEF20651>  
Occurrence/food consumption:  
Furan (<http://www.cfsan.fda.gov/~lrd/pestadd.html>)
4. List of countries where surveillance data are likely to be available, and if possible, list contact persons who could provide such data, including quality assurance information on the data.  
United States of America  
U.S. Food and Drug Administration
5. Date on which data could be submitted to JECFA:  
Summer 2008

**Criteria for the inclusion of contaminants and naturally occurring toxicants in the priority list**

1. Commodities containing the compound, furan, are in international trade and represent a significant portion of the diet;

Furan is produced during thermal processing of certain foods, and is found in foods in international trade and that are consumed worldwide. Based on US Food and Drug Administration (FDA) surveys, foods that have been found to contain furan include canned foods (fruits, vegetables, soups, stews, etc.), bottled foods (juices, nutrition drinks, sauces, etc.), jarred infant and toddler foods, coffee, and certain dry foods, such as breakfast cereals and snack foods. The most recent estimate of dietary exposure to furan by FDA was 0.26 µg/kg-bw/day, comparable to dietary acrylamide exposure. Additional data on furan levels in foods from other member countries and international organizations will be available.

2. The occurrence of the compound, furan, in commodities will have potential to cause public health and/or trade problems; and,

Furan is a liver and kidney toxicant based on animal studies. Furan is also an animal carcinogen, and is considered a probable human carcinogen, based on evaluations by the International Agency for Research on Cancer (IARC) and by the US Department of Health and Human Services National Toxicology Program (NTP Report on Carcinogens). Because furan is a potential human carcinogen, its presence in foods may have the potential to cause public health and/or trade problems.

3. Commitment that a dossier (as complete as possible) will be available for evaluation by the JECFA.

The US is prepared to provide data on furan to JECFA in summer 2008.

**b) Perchlorate****Information on Perchlorate to be evaluated by JECFA**

1. Proposal for inclusion submitted by:  
The United States of America

2. Name of compound; chemical name(s):  
Chemical Name: perchlorate ion, ClO<sub>4</sub><sup>-</sup>  
Other names: perchlorate

3. Identification of (additional) data (toxicology, metabolism, occurrence, food consumption) which could be provided to JECFA:

Toxicology/metabolism:

*Health Implications of Perchlorate Ingestion* (2005)

Committee to Assess the Health Implications of Perchlorate Ingestion

Board on Environmental Studies and Toxicology

Division on Earth and Life Studies

NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES

<http://www.nap.edu/books/0309095689/html/>

Occurrence/food consumption

Perchlorate (<http://www.cfsan.fda.gov/~lrd/pestadd.html>)

4. List of countries where surveillance data are likely to be available, and if possible, list contact persons who could provide such data, including quality assurance information on the data.

United States of America

U.S. Food and Drug Administration

5. Date on which data could be submitted to JECFA:  
Summer 2008

**Criteria for the inclusion of contaminants and naturally occurring toxicants in the priority list**

1. Commodities containing the compound, perchlorate, are in international trade and represent a significant portion of the diet;

Perchlorate is a naturally occurring and manmade chemical. Perchlorate occurs as an environmental contaminant from its use as the primary ingredient of solid rocket propellant, as well as its use in a wide variety of industrial processes and pyrotechnics. Perchlorate might get into plants when they are irrigated with perchlorate-containing water or when plants are grown in soil that has been previously exposed to perchlorate-containing water or fertilizer. A limited survey by the US Food and Drug Administration showed fresh produce (e.g., leafy greens, cantaloupes, tomatoes, grapes) from around the world in international trade to contain perchlorate. Additional data on perchlorate levels in foods may be available from other member countries and international organizations.

2. The occurrence of the compound, perchlorate, in commodities will have potential to cause public health and/or trade problems; and,

Human exposure to high dosages of perchlorate can interfere with iodide uptake into the thyroid gland, disrupting the functions of the thyroid and potentially leading to a reduction in the production of thyroid hormone. The fetuses of pregnant women who might have hypothyroidism or iodide deficiency are the most vulnerable subjects, and impairment of thyroid function in expectant mothers may affect the fetus and newborn. This may result in various effects including delayed development and decreased learning capability. As such, the presence of perchlorate in foods may have the potential to cause public health and/or trade problems.

3. Commitment that a dossier (as complete as possible) will be available for evaluation by the JECFA.

The US is prepared to provide data on perchlorate to JECFA in summer 2008.