

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD  
HEALTH  
ORGANIZATION



JOINT OFFICE: Viale delle Terme di Caracalla 00100 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

**Agenda Item 4**

**CX/NMW 00/4  
July 2000**

**JOINT FAO/WHO FOOD STANDARDS PROGRAMME**  
**CODEX COMMITTEE ON NATURAL MINERAL WATER**  
**Seventh Session**  
**Fribourg, Switzerland, 30 October - 1 November 2000**

**CODEX STANDARD FOR NATURAL MINERAL WATERS: LIMITS FOR HEALTH RELATED  
SUBSTANCES**

**Background**

1. The Codex Committee on Food Additives and Contaminant (CCFAC) had considered this issue, following the adoption of the Standard for Natural Mineral Waters by the 22nd Session of the Commission, and had circulated the Limits for Certain Substances for comments.
2. The CCFAC at its last Session (ALINORM 99/12A, paras 89-92) had discussed this matter and many delegations expressed the view that the proposed levels for contaminants in natural mineral water were too high and that natural mineral waters should comply with the WHO Guidelines for Drinking Water Quality (Volume 1, Recommendations, WHO, Geneva, 1993). Other delegations however considered that the composition of natural mineral waters was different according to the hydrology of the source and therefore different levels of contaminants may be justified.
3. The Delegation of Germany asked for the establishment of specific health related limits for certain substances in mineral water claimed to be suitable for infant food preparation.
4. The Committee agreed with the proposal of the Chairman to bring the levels of contaminants for natural mineral waters into line with the levels in the WHO Guidelines for Drinking Water Quality. The Health Related Limits for Certain Substances as amended were included in Appendix VI of the above ALINORM.
5. A number of delegations including Portugal, France, Italy, Germany, Tunisia and Switzerland did not agree with this decision for the reasons mentioned in Section 2 of the Background above.
6. The Commission at its 23<sup>rd</sup> Session (ALINORM 99/37, paras 197-200) recalled that the levels for health-related substances in the Standard for Natural Mineral Waters had been sent for endorsement to the Committee on Food Additives and Contaminants after the adoption of the Standard and that the Committee had decided at its 31<sup>st</sup> Session that these levels should be aligned with the levels in the WHO *Guidelines for Drinking Water Quality*<sup>1</sup>.
7. The Observer from the European Community expressed the view that the levels for arsenic, barium, manganese and selenium included in the current Standard should be returned to the Committee on Natural Mineral Waters, which should have the opportunity to consider the matter further and provide all relevant scientific data to the Committee on Food Additives and Contaminants in order to justify the specific levels for mineral waters. This position was supported by several delegations.

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<sup>1</sup> *Guidelines for Drinking Water Quality*, Volume 1, Recommendations, WHO, Geneva, 1993

8. The Delegation of the United States, supported by the Delegations of Canada and Malaysia, supported the alignment of the levels with the WHO Guidelines in order to ensure the protection of consumers' health, and stressed that consumers would expect mineral waters to provide at least the level of protection of tap water, especially for substances which pose serious hazards to health such as arsenic. These delegations proposed that in the meantime the WHO levels of contaminants should apply.

9. *The Commission recognized that there was no consensus on the endorsement of levels for arsenic, barium, manganese and selenium and agreed that they should be returned for further consideration to the Committee on Natural Mineral Waters as a matter of priority, following which they would be submitted to the Committee on Food Additives and Contaminants for endorsement. Except those for arsenic, barium, manganese and selenium, the Commission adopted the limits for health related substances.* The Commission noted that WHO was currently preparing a monograph on arsenic and encouraged governments to submit relevant scientific data on these substances. The Commission noted that the published Standard for Natural Mineral Waters would specify that the levels for the above-mentioned elements had not been endorsed by the Committee on Food Additives and Contaminants.

10. Therefore the Committee is invited to consider maximum levels for *arsenic, barium, manganese and selenium* and forward its decisions on the above health related substances to the Committee on Food Additives and Contaminants for endorsement.

11. The maximum levels for *arsenic, barium, manganese and selenium* contained in the Codex Standard for Natural Mineral Waters and those endorsed by the CCFAC are presented in the Table below together with the WHO Guideline values for drinking water.

#### **Codex Standard for Natural Mineral Waters: Section 3.2 Health-Related Limits for Certain Substances**

<b>Substance</b>	<b>Maximum Level in the Codex Standard for Natural Mineral Waters</b>	<b>Maximum Level endorsed by the 31<sup>st</sup> CCFAC</b>	<b>WHO Guideline value for drinking waters<sup>2</sup></b>
Arsenic	0.05 mg/l, calculated as total As	0.01 mg/l, calculated as total As	0.01 mg/l <sup>3;4</sup>
Barium	1 mg/l	0.7 mg/l	0.7 mg/l
Manganese	2 mg/l	0.5 mg/l	0.5 mg/l <sup>3</sup>
Selenium	0.05 mg/l	0.01 mg/l	0.01 mg/l

<sup>2</sup> Guidelines for Drinking Water Quality, Second Edition, Volume 2, Health Criteria and Other Supporting Information, WHO, Geneva, 1996.

<sup>3</sup> Provisional guideline value. This term is used for constituents for which there is some evidence of a potential hazard but where the available information on health effects is limited; or where an uncertainty factor greater than 1000 has been used in the derivation of the tolerable daily intake (TDI). Provisional guideline values are also recommended: (1) for substances for which the calculated guideline value would be below the practical quantification level, or below the level that can be achieved through practical treatment methods; or (2) where disinfection is likely to result in the guideline value being exceeded.

<sup>4</sup> For excess skin cancer risk of  $6 \times 10^{-4}$ . For substances that are considered to be carcinogenic, the guideline value is the concentration in drinking-water associated with an excess lifetime cancer risk of  $10^{-5}$  (one additional cancer per 100 000 of the population ingested drinking-water containing substances at the guideline value for 70 years). Concentrations associated with estimated excess lifetime cancer risks of  $10^{-4}$  and  $10^{-6}$  can be calculated by multiplying and dividing, respectively, the guideline value by 10.