

ASEAN PRINCIPLES AND CRITERIA FOR THE ESTABLISHMENT OF MAXIMUM LEVEL FOR CONTAMINANTS AND TOXINS IN FOOD AND FEED**ANNEX II: ASEAN STANDARDS FOR CONTAMINANTS AND TOXINS IN FOOD AND FEED****ARSENIC**

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|------------------------------|---|
| Reference to JECFA | : 5 (1960), 10 (1967), 27 (1983), 33 (1988), 72 (2010) |
| Toxicological guidance value | : At the 72 nd meeting of JECFA (2010), the inorganic arsenic lower limit on the benchmark dose for a 0.5% increased incidence of lung cancer (BMDL 0.5) was determined from epidemiological studies to be 3.0 µg/kg bw/day (2–7 µg/kg bw/day based on the range of estimated total dietary exposure) using a range of assumptions to estimate total dietary exposure to inorganic arsenic from drinking-water and food. The JECFA noted that the provisional tolerable weekly intake (PTWI) of 15 µg/kg bw (equivalent to 2.1 µg/kg bw/day) is in the region of the BMDL 0.5 and therefore was no longer appropriate. The JECFA withdrew the previous PTWI. |
| Contaminant definition | : Arsenic: total (As-tot) when not otherwise mentioned; inorganic arsenic (As-in); or other specification |
| Synonyms | : As |
| Related code of practice | : <i>Code of Practice for Source Directed Measures to Reduce Contamination of Foods with Chemicals (CXC 49-2001)</i> <i>Code of Practice for the Prevention and Reduction of Arsenic Contamination in Rice (CXC 77-2017)</i> |

| Commodity/Product Name | Maximum Level (ML) mg/kg | Portion of the Commodity/Product to which the ML applies | Notes/Remarks |
|-------------------------------|---------------------------------|---|--|
| Edible fats and oils | 0.1 | Whole commodity | Relevant Codex commodity standards are CXS 19-1981, CXS 33-1981, CXS 210-1999, CXS 211-1999 and CXS 329-2017. For fish oils covered by CXS 329-2017, the ML is for fish oils (As-in). Countries or importers may decide to use their own screening when applying the ML for As-in in fish oils by analyzing total arsenic (As-tot) in fish oils. If the As-tot concentration is below the ML for As-in, no further testing is required, and the sample is determined to be compliant with the ML. If the As-tot concentration is above the ML for As-in, follow-up testing shall be conducted to determine if the As-in concentration is above the ML. |

CADMIUM

Reference to JECFA : 16 (1972), 33 (1988), 41 (1993), 55 (2000), 61 (2003), 64 (2005), 73 (2010)
 Toxicological guidance value : In view of the long half-life of cadmium, daily ingestion in food has a small or even a negligible effect on overall exposure. In order to assess long- or short-term risks to health due to cadmium exposure, dietary intake should be assessed over months, and tolerable intake should be assessed over a period of at least 1 month. To encourage this view, at the 73rd meeting (2010) the JECFA decided to express the tolerable intake as a monthly value in the form of a provisional tolerable monthly intake (PTMI) and established a PTMI of 25 µg/kg bw.
 Contaminant definition : Cadmium, total
 Synonyms : Cd
 Related code of practice : *Code of Practice for Source Directed Measures to Reduce Contamination of Foods with Chemicals* (CXC 49-2001)

| Commodity/Product Name | Maximum Level (ML) mg/kg | Portion of the Commodity/Product to which the ML applies | Notes/Remarks |
|------------------------|--------------------------|--|---|
| Wheat | 0.2 | Whole commodity | The ML applies to common wheat, durum wheat, spelt and emmer. |
| Rice, polished | 0.4 | Whole commodity | |

MERCURY

Reference to JECFA : 10 (1966), 14 (1970), 16 (1972), 22 (1978), 72 (2010)
 Toxicological guidance value : At the 72nd meeting (2010), JECFA established a PTWI for inorganic mercury of 4 µg/kg bw. The previous PTWI of 5 µg/kg bw for total mercury, established at the sixteenth meeting, was withdrawn. The new PTWI for inorganic mercury was considered applicable to dietary exposure to total mercury from foods other than fish and shellfish. For dietary exposure to mercury from these foods the previously established PTWI for methyl mercury should be applied.
 Contaminant definition : Mercury, Total
 Synonyms : Hg
 Related code of practice : *Code of Practice for Source Directed Measures to Reduce Contamination of Foods with Chemicals (CXC 49-2001)*

| Commodity/Product Name | Maximum Level (ML) mg/kg | Portion of the Commodity/Product to which the ML applies | Notes/Remarks |
|------------------------|--------------------------|--|---|
| Natural mineral waters | 0.001 | | Relevant Codex commodity standard is CXS 108-1981. The ML is expressed in mg/l. |