

Lumex Instruments Insight into mysteries of Nature

List of Contaminants and Other Adulterating Substances in Foods sold in Canada

| # | Substance | Maximum Level | Food |
|---|--------------------------------------|---------------|---|
| | | 3.5 ppm* | Fish protein |
| 1 | Arsenic | 1 ppm | Edible bone meal |
| | | 0.1 ppm | Fruit juice; Fruit nectar; Beverages when ready-to-serve; Water in sealed containers other than mineral water or spring water |
| | Fluoride | 650 ppm | Edible bone meal |
| 2 | | 150 ppm | Fish protein |
| | Lead | 10 ppm | Edible bone meal |
| | | 1.5 ppm | Tomato paste; Tomato sauce |
| | | 0.5 ppm | Fish protein; Whole tomatoes |
| 3 | | 0.2 ppm | Fruit juice; Fruit nectar; Beverages when ready-to-serve; Water in sealed containers other than mineral water or spring water |
| | | 0.15 ppm | Evaporated milk; Condensed milk; Concentrated infant formula |
| | | 0.08 ppm | Infant formula when ready-to-serve |
| 4 | Tin | 250 ppm | Canned foods |
| 5 | Free gossypol | 450 ppm | Cottonseed flour |
| 6 | Aflatoxin | 15 ppb** | Nut; Nut products |
| 7 | Ethylene thiourea | 0.05 ppm | Fruits; Vegetables; Cereals |
| 8 | 2,3,7,8-tetrachlorodibenzoparadioxin | 15 ppt*** | Fish |

*) Health Canada's Bureau of Chemical Safety





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| 9 | Mineral oil | 0.3 % | Food requiring the use of mineral oil as part of good manufacturing practice |
|---|-------------|-------|--|
| | | | |

*parts per million **parts per billion, calculated on the basis of the nut meat portion ***part per trillion

List of Maximum Levels for Various Chemical Contaminants in Foods sold in Canada

| # | Contaminant | Maximum Level* | Food |
|---|--|----------------|---|
| 1 | Amnesic Shellfish Poisoning toxin (ASP) (Domoic acid) | 20 mg/kg | In bivalve shellfish edible tissue |
| 2 | Deoxynivalenol (Vomitoxin) | 2.0 mg/kg** | In uncleaned soft wheat for use in non-staple foods |
| 2 | | 1.0 mg/kg** | In uncleaned soft wheat for use in baby foods |
| • | Diarrhetic Shellfish Poisoning toxins (DSP) (sum of okadaic acid and dinophysis toxins (DTX-1, DTX-2 and DTX-3)) | 1 mg/kg** | In bivalve shellfish digestive tissue |
| 3 | | 0.2 mg/kg** | In bivalve shellfish edible tissue |
| | Ethyl carbamate | 30 µg/kg | In table wines |
| | | 100 µg/kg | In fortified wines |
| 4 | | 150 µg/kg | In distilled spirits |
| | | 400 µg/kg | In fruit brandies and liqueurs |
| | | 200 µg/kg | In sake |
| 5 | Glycoalkaloids, total (sum of alpha-solanine and alpha-chaconine) | 200 mg/kg | In potato tubers (fresh weight) |

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| 6 | Histamines | 200 mg/kg 100 mg/kg | In anchovies, fermented fish sauces and pastes In other fish and fish products |
|----|---|---|--|
| 7 | 3-MCPD (3-monochloropropane-1,2-diol) | 1 mg/kg | In Asian-style sauces such as soy, oyster, mushroom sauces, etc. |
| | | 0.5 mg/kg*** | In infant formula and sole source nutrition products, including meal replacement products |
| 8 | Melamine | 2.5 mg/kg*** | In food products containing milk and milk-derived ingredients, except infant formula and sole source nutrition products, including meal replacement products |
| | Maraum | 0.5 mg/kg | In the edible portion of all retail fish, with six exceptions (see the 1 ppm maximum level below). |
| | Mercury | 1 mg/kg | The edible portion of escolar, orange roughy, marlin, fresh and frozen tuna, shark, and swordfish |
| 9 | Patulin | 50 µg/kg | In apple juice, including the apple juice portion of any juice blends or drinks, and unfermented apple cider |
| 10 | PAHs (polycyclic aromatic hydrocarbons) | 3 µg/kg B(a)P Toxic Equivalents B(a)P = benzo(a)pyrene | In olive-pomace oils (this is a unique type of oil, distinct from other olive oils such as virgin olive oil) |
| 11 | PCBs (polychlorinated biphenyls) | ** | Fish Meat & Dairy Products Eggs Poultry |
| 12 | Paralytic Shellfish Poisoning toxins (PSP) (saxitoxin equivalents) | 0.8 mg/kg | In bivalve shellfish edible tissue |
| 13 | Pectenotoxins (PTX) (sum of PTX-1, PTX-2, PTX-3, PTX-4, PTX-6 and PTX-11) | 1 mg/kg 0.2 mg/kg | In bivalve shellfish digestive tissue In bivalve shellfish edible tissue |

*mg/kg (milligrams per kilogram) is equivalent to µg/g (micrograms per gram) and ppm (parts per million);

µg/kg (micrograms per kilogram) is equivalent to ng/g (nanograms per gram) and ppb (parts per billion)

** under review

*** combined concentration of melamine and cyanuric acid; interim maximum level

*) Health Canada's Bureau of Chemical Safety

