

Established daily oral heavy metal limits: finished products

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[Current as of April 2022]

Organization	AHPA ^a	NSF/ANSI	USP	Canada	EU ^f	California Prop 65	
						NSRL	MADL
Amounts listed in micrograms/day by oral exposure							
Arsenic (total)	NA	NA	NA	10 ^d	NA	NA	NA
Arsenic (inorganic)	10	10	15	2.1 ^d	NA	10	NA
Cadmium	4.1	4.1	5	6	1 ^g	NA ^j	4.1
Lead	6 ^b , 3 ^b	10	5	10	3 ^h	15 ^k	0.5
Mercury	NA	2 ^c	15	20	0.1	NA	NA
Methylmercury	2	NA ^c	2	2 ^e	NA	NA	NA

These values are for comparison only. Source material may include other elemental subgroup, age or commodity-specific limits. Consult the cited source before using any of the above limits.

NA – Not Assigned.

AHPA – American Herbal Products Association, Heavy Metals Guidance (October 2020).

a. All limits are most applicable to herbal products consumed in a total daily amount of 5 grams or less.

b. Listed lead limits are for adults and children, respectively.

NSF/ANSI – NSF International/American National Standard for Dietary Supplements 173 – 2021 (January 2021), 5.3.1.2 .

c. AHPA is informed that NSF is considering a proposal to revise the current mercury limit from 2 to 15 mcg/day, and the current methylmercury limit from NA to 2 mcg/day.

USP – United States Pharmacopeial Convention, USP General Chapter 2232 Elemental Impurities in Dietary Supplements (December 2014).

Canada – Canadian Natural and Non-prescription Health Products Directorate, Quality of Natural Health Products Guide, Version 3.1 (May 2015), Table 1: Adult limit per day.

d. If total arsenic exceeds the 10 mcg/day limit, the product must be tested with arsenic speciation and must not exceed 2.1 mcg/day of inorganic arsenic or 1,400 mcg/day of organic arsenic.

e. A separate methylmercury level determination is not necessary when the total mercury level measured is less than the methylmercury limit.

EU – European Union Commission Regulation 1881/2006, Setting Maximum Levels for Certain Contaminants in Foodstuffs (December 2006) O.J. (L364) 5.

f. All listed limits are in food supplements except where otherwise noted below.

g. The cadmium limit is for food supplements excluding those made exclusively from dried seaweed, seaweed derivatives, or dried bivalve mollusks. These products have a limit of 3 mcg.

h. Distinct lead limits are listed for multiple subcategories of dried spices at 3.1.26.

CA Prop 65 NSRL – California Proposition 65 No Significant Risk Levels for cancer-causing chemicals.

j. There is an established NSRL of 0.05 mcg/day for cadmium intake by inhalation.

k. Separate NSRLs are established for several lead compounds.

CA Prop 65 MADL – California Proposition 65 Maximum Allowable Dose Levels for reproductive toxicity.