Milk powders — whole, skim, and specialty: HMTc Standard

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CORRESPONDENCE

Corrections are logged publicly on the article page, each with its date, the affected value, and the source that resolved it.

KEYWORDS

heavy metals, food safety, dietary exposure

PUBLICATION HISTORY

This revision 2026-08.

Abstract

The Heavy Metal Tested & Certified standard for milk powders — whole, skim, and specialty — stated as sold on a powder basis. Powder carries its own government maximum levels reflecting the concentrated matrix; there is no reconstitution conversion. Every limit is the strictest such sovereign maximum, with a disclosed read-across where none regulates the exact analyte.

1 | How every number on this standard is set

HMTc Method v2.0 (government-limit default; no dairy reconstitution; disclosed read-across; species/packaging controls)

2 | Master limit table

All values in ppb (µg/kg), as sold basis. A brand meeting every value qualifies for the mark.

ANALYTE	HMTC LIMIT	BASIS
Lead (Pb)	20	read-across (Israel)
Cadmium (Cd)	1,000	government maximum level (Vietnam)

Total arsenic (tAs)	500	government maximum level (GB 2762)
Inorganic arsenic (iAs)	≤ tAs	bounded by tAs (reflex speciation)
Mercury, total (tHg)	50	government maximum level (Vietnam)
Methylmercury (MeHg)	≤ tHg	bounded by tHg (reflex speciation)
Nickel (Ni)	250	read-across (EU 2024/1987)
Tin (Sn)	250,000	read-across (Singapore)
Aluminium (Al)	500	read-across (Australia / New Zealand)
Total chromium (Cr)	2,000	government maximum level (GB 2762)
Hexavalent chromium (Cr-VI)	≤ Cr	bounded by Cr (reflex speciation)

3 | Derivation — where each number comes from

Every cell traces to one named sovereign maximum level (the strictest for the nearest analog), or to an explicit control, not-material, or species-bounded determination. No occurrence statistic selects a certification value.

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ANALYTE	HMTC	SOVEREIGN ANALOG / DETERMINATION
Lead (Pb)	20	read-across (Israel)
Cadmium (Cd)	1,000	government maximum level (Vietnam)
Total arsenic (tAs)	500	government maximum level (GB 2762)
Inorganic arsenic (iAs)	≤ tAs	bounded by tAs (reflex speciation)
Mercury, total (tHg)	50	government maximum level (Vietnam)
Methylmercury (MeHg)	≤ tHg	bounded by tHg (reflex speciation)
Nickel (Ni)	250	read-across (EU 2024/1987)
Tin (Sn)	250,000	read-across (Singapore); any food
Aluminium (Al)	500	read-across (Australia / New Zealand)
Total chromium (Cr)	2,000	government maximum level (GB 2762)
Hexavalent chromium (Cr-VI)	≤ Cr	bounded by Cr (reflex speciation)

4 | Cite this standard

Pendergrass, K. (2026). *Milk powders — whole, skim, and specialty: HMTc standard* (Standard No. 10.83138/hmtc.std.24.dairy-milk-powders). Institute of Contaminant Standards. https://doi.org/10.83138/hmtc.std.24.dairy-milk-powders

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References

[1] Israel
Binds Pb.
READ-ACROSS

[2] Vietnam
Binds Cd, tHg.
MAXIMUM LEVEL

[3] GB 2762
Binds tAs, Cr.
MAXIMUM LEVEL

[4] EU 2024/1987
Binds Ni.
READ-ACROSS

[5] Singapore
Binds Sn. any food.
READ-ACROSS

[6] Australia / New Zealand
Binds Al.
READ-ACROSS

STATUS AND LICENCE

A normative certification standard, editorially reviewed and version-controlled in-house; every value traces to a named sovereign maximum level, disclosed in the derivation. © 2026 Institute of Contaminant Standards / Heavy Metal Certified. All rights reserved.

COMPETING INTERESTS

This standard is published by the Heavy Metal Tested & Certified (HMTc) program, operated by the Institute of Contaminant Standards. Its statements about government regulations, toxicology, and occurrence are sourced to the cited primary and expert-body records and to the independently maintained Heavy Metal Index; the program's own certification thresholds are not used as evidence for any factual claim made here.

DATA AVAILABILITY

The works this standard draws on are listed in full in the references above and on the standard page at https://heavymetalcertified.com/standards/dairy-milk-powders. Primary legal instruments and expert-body assessments are named with their public identifiers; the underlying occurrence and toxicology corpus is maintained on the Heavy Metal Index.

PUBLICATION HISTORY

This revision 2026-08. The full dated record is maintained at https://heavymetalcertified.com/standards/dairy-milk-powders.