Liquid milk — cow: 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 liquid cow's milk — raw, pasteurized, and UHT fluid milk — stated as consumed. Every numeric limit is the strictest maximum level any credible government sets for fluid milk; where no government regulates the exact analyte, a disclosed read-across from the nearest sovereign value applies.

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 consumed basis. A brand meeting every value qualifies for the mark.

ANALYTE	HMTC LIMIT	BASIS
Lead (Pb)	20	government maximum level (India)
Cadmium (Cd)	50	government maximum level (Mercosur)
Total arsenic (tAs)	50	government maximum level (Mercosur)
Inorganic arsenic (iAs)	≤ tAs	bounded by tAs (reflex speciation)

Mercury, total (tHg)	10	government maximum level (Hong Kong)
Methylmercury (MeHg)	≤ tHg	bounded by tHg (reflex speciation)
Nickel (Ni)	100	read-across (EU 2024/1987)
Tin (Sn)	250,000	read-across (Singapore)
Aluminium (Al)	500	read-across (Australia / New Zealand)
Total chromium (Cr)	300	read-across (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.

ANALYTE	HMTC	SOVEREIGN ANALOG / DETERMINATION
Lead (Pb)	20	government maximum level (India)
Cadmium (Cd)	50	government maximum level (Mercosur)
Total arsenic (tAs)	50	government maximum level (Mercosur)
Inorganic arsenic (iAs)	≤ tAs	bounded by tAs (reflex speciation)
Mercury, total (tHg)	10	government maximum level (Hong Kong)
Methylmercury (MeHg)	≤ tHg	bounded by tHg (reflex speciation)
Nickel (Ni)	100	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)	300	read-across (GB 2762)
Hexavalent chromium (Cr-VI)	≤ Cr	bounded by Cr (reflex speciation)

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4 | Cite this standard

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References

[1] India
Binds Pb.
MAXIMUM LEVEL

[2] Mercosur
Binds Cd, tAs.
MAXIMUM LEVEL

[3] Hong Kong
Binds tHg.
MAXIMUM LEVEL

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

[5] GB 2762
Binds Cr.
READ-ACROSS

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

[7] 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-cow. Primary legal instruments and expert-body assessments are

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named with their public identifiers; the underlying occurrence and toxicology corpus is maintained on the Heavy Metal Index.