Soups, broths and stocks: HMTc Standard

Karen Pendergrass · 0000-0002-2348-7259 · Heavy Metal Tested & Certified, Institute of Contaminant Standards

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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 heavy-metal-safety standard for soups, broths and stocks in Prepared and Packaged Meals, evaluated on as consumed / ready-to-serve (reconstituted to serving strength; dry-mix and bouillon assessed as prepared, not as the concentrate). A composite meal has no sovereign maximum of its own, so 7 of 11 panel analytes publish a disclosed read-across from the strictest applicable principal-component government maximum; the remainder are held under mandatory control or a substantiated not-material determination.

1 | How every number on this standard is set

HMTc Method v2.0 (government-limit default; COMPOSITE — disclosed read-across from strictest applicable principal-component sovereign ML; never occurrence-derived)

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	read-across (Hong Kong)
Cadmium (Cd)	40	read-across (EU 2023/915)
Total arsenic (tAs)	500	read-across (Hong Kong)
Inorganic arsenic (iAs)	50	read-across (European Union)

Mercury, total (tHg)	10	read-across (Hong Kong)
Methylmercury (MeHg)	n/m	not material in this matrix
Nickel (Ni)	400	read-across (EU 2024/1987)
Tin (Sn)	control	measured every lot; no human-food maximum
Aluminium (Al)	control	measured every lot; no human-food maximum
Total chromium (Cr)	500	screening ceiling (Hong Kong)
Hexavalent chromium (Cr-VI)	n/m	not material in this matrix

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	read-across (Hong Kong)
Cadmium (Cd)	40	read-across (EU 2023/915)
Total arsenic (tAs)	500	read-across (Hong Kong)
Inorganic arsenic (iAs)	50	read-across (European Union)
Mercury, total (tHg)	10	read-across (Hong Kong)

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Methylmercury (MeHg)	n/m	Methylmercury is a component of total mercury (MeHg <= tHg); its only pathway in a soup is a seafood component, governed by the published total-mercury ceiling of 10 ug/kg on the tHg cell. The credible methylmercury limits on the register are the US FDA CPG 540.600 action level for fish, shellfish, crustaceans and other aquatic animals (fda_-cpg540600_mehg_fish_1000, 1000 ug/kg, wet weight edible portion) and the Cap. 132V fish-species rows (fish, fish balls and fish cakes 600, orange roughy 800, pink cusk-eel 1000, tuna 1200, alfonsino 1500, shark 1500, marlin 1700 ug/kg). Every one of them is an aquatic animal flesh, so none can bind. v1.2 CORRECTS A CODIFICATION-COMPLETENESS CLAIM: v1.1 asserted that the only credible methylmercury MLs on the register were the Cap. 132V fish-species rows, in the same sentence whose instruments-checked list named US FDA CPG 540.600, so the record demonstrated that it had looked at the instrument and then mis-stated what it found. The determination itself is unaffected, since 1000 is far above the binding ceiling.
Nickel (Ni) Tin (Sn)	400 control	read-across (EU 2024/1987) Inorganic tin is a tinplate migration pathway confined to the canned form, and three of the four forms this row certifies are not canned foods. The subcategory as scoped covers canned soups, dry soup mixes, bouillon cubes and powders, and ready-to-drink carton stocks and broths; the canned-foods tin maximum level reaches only the first. v1.1 published that ML as a raw-wide firm ceiling of 250 mg/kg while its own label conceded that dry-mix bouillon and carton-RTD forms have no tin migration pathway, so the compiled record asserted a 250 mg/kg tin ceiling for a carton broth that no instrument sets and the publication gate counted it as a firm protective limit. v1.2 converts the cell to the control + companion_ml pattern the other two rows of this category already use (mixed-meals-prepared-foods and bone-broth), so the canned form is verified against the ML while no ceiling is asserted for the forms the instrument does not reach. A form-split cell was considered and is not available in this compiler. A CANNED soup is verified against the canned-foods tin ML, on which three credible regulators converge at 250 mg/kg (250000 ug/kg): Codex CXS 193 (canned foods), FSANZ Schedule 19 (all canned foods) and HK Cap. 132V (canned food other than canned beverages), so the figure is not a single-jurisdiction artefact. The Cap. 132V canned-beverage row (150 mg/kg) is stricter but is not adopted: a ready-to-drink carton stock is not a canned beverage and has no tinplate contact, and a canned soup is a canned food under every one of

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Aluminium (Al)	control	No credible regulator sets an aluminium maximum level for a soup, stock or bouillon, or for any principal component of one. Instruments checked: EU 2023/915 and EU 2024/1987 (no aluminium entry), Codex CXS 193 (no aluminium entry), FSANZ Schedule 19 (aluminium appears only as infant-formula MLs of 500 and 1000 ug/kg, Category 1 scope), Hong Kong Cap. 132V Part 2 Schedule (no aluminium entry), and US FDA, Health Canada and UK dietary instruments (no aluminium ML). Aluminium reaches the credible register only in basis families that cannot anchor a food-content cell: drinking-water parametric values (EU 2020/2184 and US 21 CFR 165.110 at 200 ug/L, Health Canada at 2900 ug/L), food--contact-material specific migration limits (EU 10/2011), and toy migration limits. Aluminium--containing additive maxima exist only in non-credible-tier instruments and are additive-use levels, not contaminant ceilings. Aluminium is therefore a mandatory reported cell with no invented ceiling.
Total chromium (Cr)	500	screening ceiling (Hong Kong); Vegetables, other than pulses
Hexavalent chromium (Cr-VI)	n/m	Hexavalent chromium is reduced to Cr-III in a cooked, wet, organic-rich matrix; a Cr-VI result in soup or broth is an artifact of the total-chromium screen, not real exposure. No credible regulator sets a Cr-VI food ML.

4 | Cite this standard

Pendergrass, K. (2026). *Soups, broths and stocks: HMTc standard*. Institute of Contaminant Standards.

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References

[1] Hong Kong
Binds Pb, tAs, tHg, Cr.
MAXIMUM LEVEL

[2] EU 2023/915
Binds Cd.
READ-ACROSS

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

[4] European Union
Binds iAs.
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/soups-broths-stocks. 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/soups-broths-stocks.