Other household specialty cleaners (by functional use-case): HMTc Standard

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How every number on this page is set

> WHAT THIS STANDARD COVERS
>
> Residual bucket for household specialty cleaners not covered by a named row (by functional use-case). Nickel, chromium, and Cr(VI) are measured in this class (ecetoc1992) and screened. Products that clean food-contact articles route to the food-contact-cleaning rows; fabric-intended products route to Category 19.

Other household specialty cleaners (by functional use-case) is a hard-surface household cleaning product; the exposure of concern is incidental dermal contact. Household cleaning products are largely unregulated for heavy-metal content: the ingredient-disclosure and eco-label regimes that govern the sector (EPA Safer Choice, Green Seal GS-8, California SB 258, the New York Household Cleaner Disclosure Act) set no heavy-metal maximums, and no sovereign sets a heavy-metal maximum for hard-surface cleaners. The toxic panel is therefore read across from the nearest coherent statutory consumer-chemical regime, China's mandatory cosmetic trace-metal limits (Safety and Technical Standards for Cosmetics, 2015). Reading a cosmetic ceiling across to a hard-surface cleaner is conservative, because a cosmetic is prolonged leave-on skin contact and a cleaner is incidental. A single coherent sovereign regime is read across rather than the strictest number picked per analyte across regimes, which would build a ceiling no sovereign enforces. Every number is in the product's native basis: total heavy-metal content in the product as placed on the market.

Where no sovereign limit exists but the metal is a real or plausible contaminant of the class, the standard publishes an analytical method and an escalation rule rather than an invented threshold; those cells are listed under Screened by method below. Inorganic arsenic and methylmercury are speciation forms bounded by their total-element parents (total arsenic, total mercury) and recorded as not material rather than left blank.

Master Limit Table

Limits in mg/kg of product as placed on the market. Every claim analyte is equal at the gate. A product is certified only when every analyte is at or below 100% of its published government floor or disclosed read-across; above the limit, on any metal, it is not certified and carries no mark. Analytes with no

government limit for this product are listed below the table (screened by method, or not material), so all ten certification analytes are accounted for.

ANALYTE	HMTC LIMIT	BASIS	STRICTEST GOVERNMENT	RATIONALE
Lead (Pb)	10	total lead content, product as placed on the market (mg/kg)	China (read-across)	read-across
Arsenic, total (tAs)	2	total arsenic content, product as placed on the market (mg/kg)	China (read-across)	read-across
Cadmium (Cd)	5	total cadmium content, product as placed on the market (mg/kg)	China (read-across)	read-across
Mercury, total (tHg)	1	total mercury content, product as placed on the market (mg/kg)	China (read-across)	read-across

Screened by method: no government limit

No sovereign sets a heavy-metal maximum for these analytes in a household cleaning product, yet each is a real or plausible contaminant of the class. Rather than invent a number, the standard publishes the analytical method and the escalation rule for each: certification measures the analyte and escalates an out-of-band lot to ALARA review, not to a pass/fail against a fabricated threshold. This is an honest control, not a silent gap.

ANALYTE	ANALYTICAL METHOD	ESCALATION RULE
Nickel (Ni)	Total nickel by ICP-MS on the product as placed on market (acid digestion).	Nickel is a confirmed dermal sensitizer and is measured in household cleaning products (zhang2010; ecetoc1992). No jurisdiction sets a numeric total-nickel maximum for cleaning products, so certification screens total nickel and escalates a lot above the running category control band to ALARA review rather than pass/failing on an invented number.
Aluminium (Al)	Total aluminium by ICP-MS on the product as placed on market.	Aluminium is a claim analyte and may be a functional mineral ingredient (alumina abrasives in scouring cleaners, aluminosilicate builders). No jurisdiction sets a cleaning-product aluminium maximum. Screen total aluminium; a lot outside the functional-ingredient expectation triggers ingredient review.
Chromium, total (Cr)	Total chromium by ICP-MS on the product as placed on market.	Total chromium is measured in cleaning products (zhang2010; ecetoc1992). No jurisdiction sets a cleaning-product chromium maximum. Screen total chromium and reflex Cr(VI) speciation where total chromium is elevated or the formulation is oxidizing/acidic.
Chromium VI (Cr-VI)	Hexavalent chromium by IC-ICP-MS with alkaline extraction (US EPA 3060A / 7199) on oxidizing or acidic formulations.	Cr(VI) is measured in some consumer cleaning products (ecetoc1992) and oxidizing/acidic chemistries (bleach, oven, toilet, descaler) can stabilize it. No jurisdiction sets a cleaning-product Cr(VI) maximum. Reflex Cr(VI) speciation on oxidizing/acidic formulations and where total chromium is elevated; escalate a positive Cr(VI) result to ALARA review.

Not material for this product

These analytes carry no ceiling because a species-specific limit is bounded by its published total-element parent, or no source and no pathway exist in the product. Each determination is rebuttable and evidence-tested (recorded in the index register), screened during certification, and recorded here

rather than left as a silent gap.

ANALYTE	WHY IT CARRIES NO CEILING FOR THIS PRODUCT
Inorganic arsenic (iAs)	No jurisdiction sets an inorganic-arsenic limit for cleaning products; the consumer-chemical trace-metal instruments regulate TOTAL arsenic (see the tAs cell), which bounds the inorganic fraction (iAs <= tAs). No routed occurrence source measured or speciated inorganic arsenic in these products.
Methylmercury (MeHg)	Methylmercury has no formation or migration pathway in a cleaning formulation; it is a marine-bioaccumulation speciation. The consumer-chemical mercury instruments regulate total mercury (see the tHg cell), which bounds any organomercury fraction. No routed occurrence source measured or speciated methylmercury in these products.
Tin (Sn)	Inorganic tin has no source in a hard-surface cleaning formulation (no tinplate/canned-food pathway). Organotin is a DISTINCT species (biocide/stabiliser) restricted by REACH Annex XVII entry 20 and screened separately where a formulation could carry it; it does not bound, and is not bounded by, this inorganic-tin cell. No jurisdiction sets an inorganic-tin limit for cleaning products, and no routed occurrence source measured tin.

Derivation: every government value, side by side

Each row lists the government value(s) weighed for this analyte in the total-content basis, converted to mg/kg; the HMTc limit is the strictest of them (or the disclosed read-across where no direct sovereign limit exists).

ANALYTE	GOVERNMENT VALUE(S) CONSIDERED (MG/KG)	HMTC	BINDS
Lead (Pb)	China 10 (read-across)	10	China (read-across)
Arsenic, total (tAs)	China 2 (read-across)	2	China (read-across)
Cadmium (Cd)	China 5 (read-across)	5	China (read-across)
Mercury, total (tHg)	China 1 (read-across)	1	China (read-across)

Cite this standard

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The evidence each limit is applied to lives on the independent Heavy Metal Index; HMTc cites it one way and never the reverse. HMTc standards are living, versioned documents; this page reflects 1.0 (2026-08-13).

Source regulations

Every government regulation weighed to set this standard, in the total-content basis of the product as placed on the market. Household cleaning products are largely unregulated for heavy-metal content; where no sovereign limit exists, the analyte is screened by method or recorded as not material rather than assigned an invented number.

#	Regulation	Basis	Role in this standard
1	China Safety and Technical Standards for Cosmetics (2015, NMPA)	finished consumer-chemical product as placed on market	Read-across anchor for the toxic panel (nearest coherent statutory consumer-chemical regime)