Coffee, ready-to-drink: HMTc Standard

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CITE AS

Pendergrass K. "Coffee, ready-to-drink: HMTc Standard". Heavy Metal Certified, 2026. https://heavymetalcertified.com/standards/-coffee-ready-to-drink. CC BY 4.0.

CORRESPONDENCE

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KEYWORDS

heavy metals, food safety, dietary exposure

PUBLICATION HISTORY

This revision 2026-08.

Abstract

The Heavy Metal Tested & Certified heavy-metal-safety standard for ready-to-drink coffee in Beverages (canned and bottled coffee, cold-brew and nitro coffee, ready-to-drink coffee drinks), evaluated on the liquid as consumed at single strength. Every panel analyte carries a limit: eight numeric ceilings (Hong Kong's direct coffee-beverage lead limit, the drinking-water quality standards read across for the water-borne metals, and the canned-beverage tin limit) plus three species bounded by their parent total. The dry coffee commodity is certified separately in its own as-sold basis; the two bases are never mixed.

1 | How every number on this standard is set

HMTc Method v2.0 (government-limit-only): the strictest applicable sovereign maximum level for this exact beverage form and analyte in the row's declared native basis, with disclosed read-across where the exact cell is unregulated, a substantiated not-material determination where a species is bounded or is a method artifact, and a control where no defensible sovereign number and no supportable near-neighbour exist. Never occurrence-derived. Ready-to-drink and dry-commodity bases are never mixed and no brewing, dilution or reconstitution factor is invented.

2 | Master limit table

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

ANALYTE	TIER	HMTC LIMIT	BASIS
Lead (Pb)	Tier 1	200	government maximum level

Cadmium (Cd)	Tier 1	2	human-grade read-across (AU)
Total arsenic (tAs)	Tier 2	10	human-grade read-across (European Union)
Inorganic arsenic (iAs)	Tier 1	≤ tAs	bounded by tAs (reflex speciation)
Mercury, total (tHg)	Tier 1	1	human-grade read-across (European Union)
Methylmercury (MeHg)	Tier 1	≤ tHg	bounded by tHg (reflex speciation)
Nickel (Ni)	Tier 2	20	human-grade read-across (European Union)
Tin (Sn)	Tier 2	100,000	human-grade read-across (European Union)
Aluminium (Al)	Tier 2	200	human-grade read-across (European Union)
Total chromium (Cr)	Tier 2	50	human-grade read-across (AU)
Hexavalent chromium (Cr-VI)	Tier 2	10	human-grade read-across (US-CA)

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)	200	government maximum level
Cadmium (Cd)	2	AU — human-food analog
Total arsenic (tAs)	10	European Union — human-food analog

Inorganic arsenic (iAs)	≤ tAs	Inorganic arsenic carries no coffee-beverage-specific sovereign cell; it is a component of total arsenic bounded by the total-arsenic ceiling adjudicated for this row (iAs <= tAs = 10 ug/kg), an enforceable ceiling via reflex speciation.
Mercury, total (tHg)	1	European Union — human-food analog
Methylmercury (MeHg)	≤ tHg	Methylmercury has no formation pathway in a water-based coffee beverage and is a component of total mercury (MeHg <= tHg), bounded by the total-mercury ceiling adjudicated for this row (1 ug/kg); no separate methylmercury ceiling is published.
Nickel (Ni)	20	European Union — human-food analog
Tin (Sn)	100,000	European Union — human-food analog
Aluminium (Al)	200	European Union — human-food analog
Total chromium (Cr)	50	AU — human-food analog
Hexavalent chromium (Cr-VI)	10	US-CA — human-food analog

4 | Cite this standard

Pendergrass, K. "Coffee, ready-to-drink." In Heavy Metal Tested & Certified (HMTc) Beverages standard, version 1.0 (2026-08-27). Institute of Contaminant Standards (ICS), 2026.

References

[1] AU — human-food maximum levels
Binds Cd, Cr. Strictest applicable human-food sovereign maximum for the nearest analog.
MAXIMUM LEVEL

[2] European Union — human-food maximum levels
Binds tAs, tHg, Ni, Sn, Al. Strictest applicable human-food sovereign maximum for the nearest analog.
MAXIMUM LEVEL

[3] US-CA — human-food maximum levels
Binds Cr-VI. Strictest applicable human-food sovereign maximum for the nearest analog.
MAXIMUM LEVEL

STATUS AND LICENCE

Editorially reviewed in-house; no external peer review has been completed on this reference. Published as a preprint with its review state tracked on the article page. Released under CC BY 4.0.

DATA AVAILABILITY

The works this reference draws on are listed in full in the references above and on the briefing page at https://heavymetalcertified.com/standards/coffee-ready--to-drink. 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.

COMPETING INTERESTS

This briefing 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.

PUBLICATION HISTORY

This revision 2026-08. The full dated record is maintained at https://heavymetalcertified.com/standards/coffee-ready--to-drink.