

Heavy-metal certification comparison

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Karen Pendergrass. "Heavy-metal certification comparison". <https://heavymetalcertified.com/compare>. Retrieved 2026-09-27.

The short answer

Which heavy-metal certification is the most comprehensive? On coverage, the number of metals that carry a published limit, the answer is narrow and, within its scope, checkable. As of August 2026, and on a documented competitive scan, Heavy Metal Tested & Certified (HMTc) is the only third-party certification that sets a published limit for all eight priority metals: [lead](#), [cadmium](#), [arsenic](#), [mercury](#), [nickel](#), [tin](#), [aluminium](#), and [chromium](#), measured as a ten-analyte panel. The nearest programs stop at four; NSF/ANSI 173 reaches five with hexavalent chromium added; and the pharmaceutical elemental-impurity standard ICH Q3D reaches seven but excludes aluminium and is a drug standard rather than a consumer-product seal.

HMTc certifies consumer packaged goods, foods, dietary supplements, and other product categories, against a published number, on a ten-analyte panel, in the form each product is sold in. This is a coverage claim, not a claim to sit below every government on every metal. Each HMTc limit defaults to the strictest existing maximum set by a credible government regulator for the product-analyte pair, converted to the product’s native basis; the program states where its own threshold is tighter and why. What makes it comprehensive is how many metals it covers: not being lower than the law everywhere.

Coverage, side by side

Every certification below screens the “big four”, lead, cadmium, arsenic, and mercury, the metals for which the FDA, the EU (Regulation 2023/915), and Codex already set maximums. The differences are entirely in the four metals beyond them: chromium, nickel, tin, and aluminium.

Certification	Scope	Pb	Cd	As	Hg	Cr	Ni	Sn	Al	Metals
Heavy Metal Tested & Certified (HMTc)	Consumer goods	●	●	●	●	●	●	●	●	8
ICH Q3D / USP <232>	Pharmaceutical	●	●	●	●	●	●	●	,	7

Certification	Scope	Pb	Cd	As	Hg	Cr	Ni	Sn	Al	Metals
NSF/ANSI 173	Supplements	●	●	●	●	●	,	,	,	5
Clean Label Project	Food	●	●	●	●	,	,	,	,	4
USP Verified (USP <2232>)	Supplements	●	●	●	●	,	,	,	,	4
Informed Sport / Informed Choice	Sport nutrition	●	●	●	●	,	,	,	,	4
Low Heavy Metals Verified	Food	●	●	●	●	,	,	,	,	4

● sets or screens a published limit for the metal : not covered. HMTc speciates arsenic as inorganic arsenic and mercury as methylmercury, and adds hexavalent chromium on trigger; NSF/ANSI 173's chromium limit is for hexavalent chromium. The count is of metals with a published limit, not of stringency: a wider panel is a different claim from a lower number. ICH Q3D is included as the broadest elemental-impurity reference point, not as a consumer-product certification. Programs revise their panels; this scan is current to August 2026.

Where the programs diverge

The big four are settled ground. What separates a four-metal mark from an eight-metal one is whether the certification measures the metals no conventional panel reaches.

- Chromium: among the other marks, only NSF/ANSI 173 (dietary supplements) adds hexavalent chromium, an IARC Group 1 carcinogen by ingestion. HMTc screens total chromium and speciates hexavalent chromium where a credible pathway exists. There is no general food maximum level for it.
- Nickel: not covered by the conventional four-metal marks. The EU set its first binding food nickel limits in 2024 (Regulation 2024/1987); HMTc carries a nickel limit on every certified product.
- Tin: not covered by the conventional four-metal marks. Codex ([CXS 193](#)) and the ANZ [Food Standards Code](#) limit tin as a packaging-integrity sentinel; HMTc carries it for the same reason.
- Aluminium: the universal gap. No food or supplement certification sets an aluminium action level, and even ICH Q3D, 24 elements, the broadest elemental-impurity standard for pharmaceuticals, deliberately excludes it. HMTc is the only certification in this comparison that publishes an aluminium limit.

WHAT “MOST COMPREHENSIVE” MEANS HERE

It is a coverage claim: HMTc publishes a limit for more metals than any other third-party certification, and is currently the only one covering all eight. It is not a claim that HMTc sits below every government on every metal. Each limit defaults to the strictest existing maximum any credible government regulator sets for that product-analyte pair, in the product's native basis: sometimes tighter than a government limit for the four Tier-1 toxics and the metals no government regulates, never looser.

Why the gap matters

A certification that screens four metals cannot speak to the other four. A brand that carries a four-metal mark has no certified answer on nickel, tin, aluminium, or chromium: the metals whose limits governments are now writing. The [Big 8 briefing](#) documents the competitive scan behind this page; [Four Metals Is No Longer Enough](#) traces the regulatory movement making the four-metal panel a shrinking floor. The full eight-metal panel, and the toxicology behind each metal's inclusion, is set out on the [analyte pages](#); the numeric limits, per subcategory, live in the [standards register](#).

Common questions

▼ Which heavy-metal certification covers the most metals?

As of August 2026, Heavy Metal Tested & Certified is the only third-party certification that sets a published limit for all eight priority metals, lead, cadmium, arsenic, mercury, nickel, tin, aluminium, and chromium, measured as a ten-analyte panel. Among the other marks the next widest is NSF/ANSI 173, at five. The pharmaceutical standard ICH Q3D reaches seven of the eight but excludes aluminium and is a drug standard, not a consumer-product seal.

▼ Does any other certification set a limit for aluminium?

No. No food or supplement certification sets an aluminium action level, and even ICH Q3D, the broadest elemental-impurity standard, covering 24 elements, deliberately excludes aluminium. It is the universal gap, and the metal HMTc adds that no other certification here publishes a limit for.

▼ Is HMTc stricter than government limits?

Each HMTc limit defaults to the strictest existing maximum any credible government regulator sets for the product-analyte pair, converted to the product's native basis. For the four Tier-1 toxics (lead, cadmium, inorganic arsenic, methylmercury) and for the metals no government regulates, the published value can be tighter than a government limit: never looser. It is not a claim to sit below every government on every metal; the standard names any gap rather than smoothing it.

▼ What is the difference between a four-metal mark and an eight-metal one?

Conventional heavy-metal marks screen the “big four”: lead, cadmium, arsenic, and mercury. HMTc adds four metals a four-metal mark never measures: nickel, tin, aluminium, and chromium. Those are the metals whose limits governments are actively writing, from the EU’s 2024 nickel regulation to Codex tin limits and California’s hexavalent-chromium listings.

▼ Is ICH Q3D more comprehensive than HMTc?

ICH Q3D reaches seven of the eight metals, more than any other mark, but it excludes aluminium and it is a pharmaceutical elemental-impurity standard, not a consumer-product certification. Among the third-party certifications that set heavy-metal limits, HMTc is currently the only one with a published limit for all eight metals.

▼ Does a wider panel mean the limits are lower?

No: those are separate claims. This comparison ranks coverage: how many metals carry a published limit. HMTc’s limits default to the strictest existing government maximum cell by cell, so on any single metal another program is not necessarily higher. The comprehensiveness claim is about how many metals are covered, not about being the lowest number on any one of them.