Cooking oils, other (canola, sunflower, coconut, avocado, sesame): 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 Cooking oils, other (canola, sunflower, coconut, avocado, sesame) (Culinary Oils and Fats), stated as sold. Each analyte carries the strictest applicable government maximum level in the product's native basis, with a disclosed read-across or a mandatory control where no government regulates the exact product.

1 | How every number on this standard is set

HMTc Method v2.0 (government-limit default; face value, no reconstitution; read-across / control / not-material for unregulated cells; no occurrence percentiles)

2 | Master limit table

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

ANALYTE	TIER	HMTC LIMIT	BASIS
Lead (Pb)	Tier 1	80	government maximum level
Cadmium (Cd)	Tier 1	30	government maximum level

Total arsenic (tAs)	Tier 2	100	government maximum level
Mercury, total (tHg)	Tier 1	20	government maximum level
Nickel (Ni)	Tier 2	100	human-grade read-across (European Union)
Tin (Sn)	Tier 2	200,000	human-grade read-across (European Union)
Aluminium (Al)	Tier 2	1,000	human-grade read-across (European Union)
Total chromium (Cr)	Tier 2	300	human-grade read-across (China)
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)	80	government maximum level
Cadmium (Cd)	30	government maximum level
Total arsenic (tAs)	100	government maximum level
Inorganic arsenic (iAs)	100	Inorganic arsenic is a component of total arsenic (iAs <= tAs). The iAs value (100 ug/kg) is not below the binding total arsenic ceiling (100 ug/kg), so inorganic arsenic is governed by and bounded by the total arsenic ceiling; no separate iAs ceiling is published. It is enforced by reflex speciation whenever tAs is elevated.
Mercury, total (tHg)	20	government maximum level

Methylmercury (MeHg)	20	Methylmercury is a component of total mercury (MeHg <= tHg). The MeHg value (20 ug/kg) is not below the binding total mercury ceiling (20 ug/kg), so methylmercury is governed by and bounded by the total mercury ceiling; no separate MeHg ceiling is published. It is enforced by reflex speciation whenever tHg is elevated.
Nickel (Ni)	100	European Union — human-food analog
Tin (Sn)	200,000	European Union — human-food analog
Aluminium (Al)	1,000	European Union — human-food analog
Total chromium (Cr)	300	China — human-food analog
Hexavalent chromium (Cr-VI)	10	US-CA — human-food analog

4 | Cite this standard

Pendergrass, K. (2026). *Cooking oils, other (canola, sunflower, coconut, avocado, sesame): HMTc standard* (Standard No. 10.83138/hmtc.std.30.cooking-oils-other). Institute of Contaminant Standards. https://doi.org/10.83138/hmtc.std.30.cooking-oils-other

References

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

[2] European Union — human-food maximum levels
Binds 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

A normative certification standard, editorially reviewed and version-controlled in-house; every value traces to a named sovereign maximum level, disclosed in the derivation.

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.

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/cooking-oils-other. 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/cooking-oils-other.