Candy and confectionery (hard candy, caramels, imported/ethnic sweets): HMTc Standard

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CITE AS

Pendergrass, K. (2026). Candy and confectionery (hard candy, caramels, imported/ethnic sweets): HMTc Standard. 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 standard for Candy and confectionery (hard candy, caramels, imported/ethnic sweets) (Chocolate, Cocoa and Confectionery), 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; explicit-id lookup; legislated product-form splits preserved)

2 | Master limit table

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

ANALYTE	HMTC LIMIT	BASIS
Lead (Pb)	100	government maximum level (Mercosur)
Cadmium (Cd)	—	—
Total arsenic (tAs)	100	government maximum level (Mercosur)

Inorganic arsenic (iAs)	n/m	not material in this matrix
Mercury, total (tHg)	n/m	not material in this matrix
Methylmercury (MeHg)	n/m	not material in this matrix
Nickel (Ni)	—	—
Tin (Sn)	n/m	not material in this matrix
Aluminium (Al)	n/m	not material in this matrix
Total chromium (Cr)	—	—
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)	100	government maximum level (Mercosur)
Cadmium (Cd)	—	—
Total arsenic (tAs)	100	government maximum level (Mercosur)
Inorganic arsenic (iAs)	n/m	No jurisdiction sets an inorganic-arsenic maximum level for candy; the total-arsenic candy limit (MERCOSUR/Paraguay, 100 ug/kg) bounds the inorganic fraction (iAs <= tAs).
Mercury, total (tHg)	n/m	Sugar, glucose syrup and confectionery fats carry no mercury source, and there is no bioaccumulation or migration pathway in a candy. The 21 CFR 73.85 'Caramel; food use' mercury figure (100 ug/kg) is a purity specification for the caramel COLOUR ADDITIVE, not a limit for caramel candy, and is not applied here. Rebuttable if a routed source reports mercury in confectionery.

Methylmercury (MeHg)	n/m	Methylmercury is the organomercury speciation of mercury and is arithmetically bounded by total mercury (MeHg <= tHg); sugar confectionery carries no mercury source and no methylmercury formation pathway, so any organomercury fraction sits below the total-mercury determination.
Nickel (Ni)	—	—
Tin (Sn)	n/m	No tin source in wrapped/boxed sugar confectionery; tin is a tinplate-can migration pathway only.
Aluminium (Al)	n/m	Aluminium in confectionery derives from the permitted additive aluminium (aluminium-lake colour, EU E173 / US 21 CFR 73), not contamination, and is managed by additive law and by intake against the EFSA/JECFA TWI, not by a per-food contaminant maximum level. No credible regulator sets an aluminium contaminant ML for candy.
Total chromium (Cr)	—	—
Hexavalent chromium (Cr-VI)	n/m	Hexavalent chromium is the Cr(VI) speciation of chromium and is bounded by the total-chromium control (Cr-VI <= total Cr), which is screened for this category; no jurisdiction sets a Cr-VI food maximum level. Corroborating: Cr(VI) is reduced to chromium(III) in the reducing, sugar-rich confection matrix and does not persist as Cr(VI).

4 | Cite this standard

Pendergrass, K. (2026). *Candy and confectionery (hard candy, caramels, imported/ethnic sweets): HMTc standard*. Institute of Contaminant Standards.

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References

[1] Mercosur
Binds Pb, tAs.
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. © 2026 Institute of Contaminant Standards / Heavy Metal Certified. All rights reserved.

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/confectionery-candy. 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 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.

PUBLICATION HISTORY

This revision 2026-08. The full dated record is maintained at https://heavymetalcertified.com/standards/confectionery-candy.