# Instant air refreshment sprays (aerosol cans, trigger sprays): HMTc Standard

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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 instant air refreshment sprays (aerosol cans, trigger sprays) in Home Air and Inhalation-Adjacent Products, evaluated on as sold, micrograms of element per kilogram of the emitting material (the fragrance concentrate, wax, gel, botanical mass or refill charge that is aerosolised, evaporated or combusted), with component-level screening of the article's non-emitting parts; a content screen on the article and its refill, never an emission rate, a per-actuation dose or an indoor-air concentration. 4 of 11 panel analytes publish a numeric limit taken from the strictest applicable government maximum; the remainder are held under mandatory control or a substantiated not-material determination.

## 1 | How every number on this standard is set

HMTc Method v2.0 (government-limit-only initial setting: the strictest applicable sovereign maximum for this exact product form in its native basis; disclosed read-across where the exact cell is unregulated; control where neither a sovereign number nor a supportable near-neighbour analogue exists; never occurrence-derived)

## 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) | 500 | read-across (US-CO) |
| Cadmium (Cd) | 200 | read-across (US-CO) |
| Total arsenic (tAs) | 200 | read-across (US-CO) |
| Inorganic arsenic (iAs) | ≤ tAs | bounded by tAs (reflex speciation) |
| Mercury, total (tHg) | 100 | read-across (US-CO) |
| Methylmercury (MeHg) | ≤ tHg | bounded by tHg (reflex speciation) |
| Nickel (Ni) | 18,800 | read-across (European Union) |
| Tin (Sn) | 3,750,000 | read-across (European Union) |
| Aluminium (Al) | 560,000 | read-across (European Union) |
| Total chromium (Cr) | 600 | screening ceiling (US-MD) |
| Hexavalent chromium (Cr-VI) | ≤ Cr | bounded by Cr (reflex speciation) |

## 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) | 500 | read-across (US-CO); inhaled product or audited product administered by metered-dose nasal spray |
| Cadmium (Cd) | 200 | read-across (US-CO); inhaled product or audited product administered by metered-dose nasal spray |
| Total arsenic (tAs) | 200 | read-across (US-CO); inhaled product or audited product administered by metered-dose nasal spray |
| Inorganic arsenic (iAs) | ≤ tAs | bounded by tAs (reflex speciation) |
| Mercury, total (tHg) | 100 | read-across (US-CO); inhaled product or audited product administered by metered-dose nasal spray |
| Methylmercury (MeHg) | ≤ tHg | bounded by tHg (reflex speciation) |

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| | | |
|---|---|---|
| Nickel (Ni) | 18,800 | read-across (European Union); toys (accessible toy material); pacifiers/soothers reached via the EN 1400 soother standard (excluded from the TSD itself, Annex I item 16); EN 71-3 test basis |
| Tin (Sn) | 3,750,000 | read-across (European Union); toys (accessible toy material); pacifiers/soothers reached via the EN 1400 soother standard (excluded from the TSD itself, Annex I item 16); EN 71-3 test basis |
| Aluminium (Al) | 560,000 | read-across (European Union); toys (accessible toy material); pacifiers/soothers reached via the EN 1400 soother standard (excluded from the TSD itself, Annex I item 16); EN 71-3 test basis |
| Total chromium (Cr) | 600 | screening ceiling (US-MD); usable cannabis and cannabis products except edible products; inhalation route |
| Hexavalent chromium (Cr-VI) | ≤ Cr | bounded by Cr (reflex speciation) |

## 4 | Cite this standard

Pendergrass, K. (2026). *Instant air refreshment sprays (aerosol cans, trigger sprays): HMTc standard* (Standard No. 10.83138/hmtc.std.22.instant-air-refreshment-sprays). Institute of Contaminant Standards. https://doi.org/10.83138/hmtc.std.22.instant-air-refreshment-sprays

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## References

[1] US-CO
Binds Pb, Cd, tAs, tHg. inhaled product or audited product administered by metered-dose nasal spray.
READ-ACROSS

[2] European Union
Binds Ni, Sn, Al. toys (accessible toy material); pacifiers/soothers reached via the EN 1400 soother standard (excluded from the TSD itself, Annex I item 16); EN 71-3 test basis.
READ-ACROSS

[3] US-MD
Binds Cr. usable cannabis and cannabis products except edible products; inhalation route.
MAXIMUM LEVEL

STATUS AND LICENCE

COMPETING INTERESTS

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.

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## 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/instant-air-refreshment-sprays. 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/instant-air-refreshment-sprays.