

# Cannabis flower and dried herb: HMTc Standard

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CITE AS

Pendergrass, K. (2026). Cannabis flower and dried herb: HMTc Standard (Standard No. 10.83138/hmtc.std.25.cannabis-flower). Institute of Contaminant Standards. <https://doi.org/10.83138/hmtc.std.25.cannabis-flower>  
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KEYWORDS

heavy metals, food safety, dietary exposure

PUBLICATION HISTORY

This revision 2026-08.

CORRESPONDENCE

Corrections are logged publicly on the article page, each with its date, the affected value, and the source that resolved it.

## Abstract

The Heavy Metal Tested & Certified heavy-metal-safety standard for cannabis flower and dried herb (Cannabis, Hemp, and CBD Products), evaluated on the finished inhalable product as sold. Each limit is the strictest sovereign cannabis heavy-metal action level applicable to the inhalation route; total chromium is a screening ceiling with hexavalent chromium as the binding control, and inorganic arsenic, methylmercury and Cr(VI) are enforced by reflex speciation.

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

HMTc Method v2.0 (government-limit default, route-preserving; strictest applicable sovereign cannabis maximum; occurrence never selects a value)

## 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 | 500        | sovereign maximum level            |
| Cadmium (Cd)            | Tier 1 | 200        | sovereign maximum level            |
| Total arsenic (tAs)     | Tier 2 | 200        | sovereign maximum level            |
| Inorganic arsenic (iAs) | Tier 1 | ≤ tAs      | bounded by tAs (reflex speciation) |

|                             |        |         |                                          |
|-----------------------------|--------|---------|------------------------------------------|
| Mercury, total (tHg)        | Tier 1 | 100     | sovereign maximum level                  |
| Methylmercury (MeHg)        | Tier 1 | ≤ tHg   | bounded by tHg (reflex speciation)       |
| Nickel (Ni)                 | Tier 2 | 800     | human-grade read-across (European Union) |
| Tin (Sn)                    | Tier 2 | 250,000 | human-grade read-across (Singapore)      |
| Aluminium (Al)              | Tier 2 | 100,000 | human-grade read-across (China)          |
| Total chromium (Cr)         | Tier 2 | 600     | sovereign maximum level                  |
| Hexavalent chromium (Cr-VI) | Tier 2 | ≤ 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     | government maximum level                                                                                                                                                                        |
| Cadmium (Cd)            | 200     | government maximum level                                                                                                                                                                        |
| Total arsenic (tAs)     | 200     | government maximum level                                                                                                                                                                        |
| Inorganic arsenic (iAs) | ≤ tAs   | iAs carries no product-specific sovereign cell; it is a component of and bounded by its parent total tAs (iAs ≤ tAs), an enforceable ceiling via reflex speciation rather than an empty cell.   |
| Mercury, total (tHg)    | 100     | government maximum level                                                                                                                                                                        |
| Methylmercury (MeHg)    | ≤ tHg   | MeHg carries no product-specific sovereign cell; it is a component of and bounded by its parent total tHg (MeHg ≤ tHg), an enforceable ceiling via reflex speciation rather than an empty cell. |
| Nickel (Ni)             | 800     | European Union — human-food analog                                                                                                                                                              |
| Tin (Sn)                | 250,000 | Singapore — human-food analog                                                                                                                                                                   |
| Aluminium (Al)          | 100,000 | China — human-food analog                                                                                                                                                                       |

|                             |      |                                                                                                                                                                                                 |
|-----------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total chromium (Cr)         | 600  | government maximum level                                                                                                                                                                        |
| Hexavalent chromium (Cr-VI) | ≤ Cr | Cr-VI carries no product-specific sovereign cell; it is a component of and bounded by its parent total Cr (Cr-VI ≤ Cr), an enforceable ceiling via reflex speciation rather than an empty cell. |

## 4 | Cite this standard

Pendergrass, K. (2026). *Cannabis flower and dried herb: HMTc standard* (Standard No. 10.83138/hmtc.std.25.cannabis-flower). Institute of Contaminant Standards.  
<https://doi.org/10.83138/hmtc.std.25.cannabis-flower>

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## References

- [1] China — human-food maximum levels  
 Binds Al. Strictest applicable human-food sovereign maximum for the nearest analog.  
 MAXIMUM LEVEL
- [2] European Union — human-food maximum levels  
 Binds Ni. Strictest applicable human-food sovereign maximum for the nearest analog.  
 MAXIMUM LEVEL
- [3] Singapore — human-food maximum levels  
 Binds Sn. 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. © 2026 Institute of Contaminant Standards / Heavy Metal Certified. All rights reserved.

### 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/cannabis-flower>. 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/cannabis-flower>.