

# Baby sunscreen, chemical UV filters (clean): HMTc Standard

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KEYWORDS

heavy metals, food safety, dietary exposure

PUBLICATION HISTORY

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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.

## Abstract

The Heavy Metal Tested & Certified heavy-metal-safety standard for baby sunscreen, chemical UV filters (clean) in Infant and Child Personal Care (Ages 0-5), evaluated on finished cosmetic as placed on market (total content, ug/kg of product as sold). 5 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 default) as applied to a child-scoped cosmetic category: every numeric cell is the strictest applicable sovereign finished-cosmetic maximum in the row's native total-content basis, or a disclosed read-across of a stricter sovereign tier from the same instrument where that instrument writes an adult-market loosening carve-out that HMTc declines to adopt for a product marketed to ages 0-5. No cell is 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 | TIER | HMTc LIMIT | BASIS |
|---------|------|------------|-------|
|---------|------|------------|-------|

|                             |        |           |                                          |
|-----------------------------|--------|-----------|------------------------------------------|
| Lead (Pb)                   | Tier 1 | 2,000     | government maximum level                 |
| Cadmium (Cd)                | Tier 1 | 100       | government maximum level                 |
| Total arsenic (tAs)         | Tier 2 | 500       | government maximum level                 |
| Inorganic arsenic (iAs)     | Tier 1 | ≤ tAs     | bounded by tAs (reflex speciation)       |
| Mercury, total (tHg)        | Tier 1 | 100       | government maximum level                 |
| Methylmercury (MeHg)        | Tier 1 | ≤ tHg     | bounded by tHg (reflex speciation)       |
| Nickel (Ni)                 | Tier 2 | 10,000    | government maximum level                 |
| Tin (Sn)                    | Tier 2 | 3,750,000 | human-grade read-across (European Union) |
| Aluminium (Al)              | Tier 2 | 560,000   | human-grade read-across (European Union) |
| Total chromium (Cr)         | Tier 2 | 50        | human-grade read-across (AU)             |
| Hexavalent chromium (Cr-VI) | Tier 2 | 5         | human-grade read-across (European Union) |

### 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)               | 2,000 | government maximum level                                                                                                                                                                      |
| Cadmium (Cd)            | 100   | government maximum level                                                                                                                                                                      |
| Total arsenic (tAs)     | 500   | 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)                 | 10,000    | government maximum level                                                                                                                                                                        |
| Tin (Sn)                    | 3,750,000 | European Union — human-food analog                                                                                                                                                              |
| Aluminium (Al)              | 560,000   | European Union — human-food analog                                                                                                                                                              |
| Total chromium (Cr)         | 50        | AU — human-food analog                                                                                                                                                                          |
| Hexavalent chromium (Cr-VI) | 5         | European Union — human-food analog                                                                                                                                                              |

#### 4 | Cite this standard

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## References

- [1] AU — 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 Sn, Al, 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. © 2026 Institute of Contaminant Standards / Heavy Metal Certified. All rights reserved.

#### 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

#### PUBLICATION HISTORY

The works this reference draws on are listed in full in the references above and on the briefing page at <https://heavymetalcertified.com/standards/baby-sunscreen-chemical>.

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.

This revision 2026-08. The full dated record is maintained at <https://heavymetalcertified.com/standards/baby-sunscreen-chemical>.