

Why the Baby-Wipes Standard Adds Antimony

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THE CLAIM

TECHNICAL REPORT · HMTc STANDARDS BRIEFING 13 · SEPTEMBER 2026

Version 2 of the baby-wipes standard adds antimony, and it sets the ceiling by binding a government floor rather than inventing one. The limit is total antimony below 30 mg/kg, entered as 30000 µg/kg, in the finished product, measured directly on a wipe and included in pass/fail.

Abstract

Version 2 of the Heavy Metal Tested and Certified standard for baby wipes adds antimony to the panel and holds it below 30 mg/kg, entered as 30000 µg/kg, on the total content of the finished product. The number is not one HMTc originated. It is the antimony floor in the EU Ecolabel for absorbent hygiene products, Commission Decision (EU) 2023/1809, Annex I criterion 7.3.8, which requires antimony to be present in the final product at less than 30 mg/kg ^[1]. That Ecolabel is voluntary, and the cell says so plainly rather than dressing a voluntary floor as a mandate. Because the criterion is written on total content in the final product, the limit is measured directly on a wipe, and the cell is included in pass/fail. One government figure sits close enough to invite confusion, and it is kept separate on purpose: Korea's MFDS Notice No. 2026-23, revised 24 March 2026 and first enacted as Notice No. 2018-19 on 21 March 2018, sets antimony for children's disposable diapers at 60 mg/kg or less by migration, applied separately to the inner lining and the waterproof layer ^[2]. Migration and total content are not the same measurement, so the Korea diaper figure is precedent that antimony belongs on a baby-product panel rather than the baby-wipes number itself.

Version 2 adds antimony and changes nothing else about how the standard is published. No products had been certified under version 1.0. The version-1.0 DOI stays live as the previous version, [10.83138/hmtc.std.2.baby-wipes](https://doi.org/10.83138/hmtc.std.2.baby-wipes) ^[3], and version 2 deposits no new DOI. Every other analyte cell keeps the basis it already carried. What follows sets out what version 2 changes, where the number comes from, the evidence it answers to, and what the mark does and does not claim.

What version 2 sets, and what it leaves alone

Version 2 adds antimony and does nothing to the version-1.0 DOI. No products had been certified under version 1.0, so nothing certified is disturbed. That DOI is the previous version, not a withdrawn one, and it stays resolvable at <https://doi.org/10.83138/hmtc.std.2.baby-wipes>^[3]. DataCite records it as version 1.0, publication year 2026, registered 19 September 2026, with no separate print date and no volume or pages, and the house version history dates edition 1.0 to 2026-08-17. Version 2 does not replace that DOI with a new one, and it deposits none of its own. The current text of the standard is the [baby wipes standard](#), where the antimony cell reads 30000 µg/kg, is included in pass/fail alongside the other analytes, and carries its source comparator, strictly less than 30 mg/kg, in the cell provenance.

Where the number comes from

The design rule is the one the rest of the program follows: adopt the strictest applicable government figure on the product’s own basis, and invent nothing. For antimony in a wipe that figure is the EU Ecolabel one, so the cell is entered at 30000 µg/kg and included in pass/fail.

Commission Decision (EU) 2023/1809 is the EU Ecolabel for absorbent hygiene products, and its Annex I criterion 7.3.8 governs impurities in the final product: the listed chemicals shall not be present in the final product at a concentration higher than Table 9, where antimony is set at < 30 mg/kg^[1]. The Ecolabel is voluntary, and the cell discloses that rather than implying a mandate. It is the government floor for this analyte. Because the decision’s own assessment accepts analysis of the final product, the limit is measured directly on a wipe. Thirty mg/kg is 30000 µg/kg, the source comparator is strictly less than 30 mg/kg, and because the compiled record carries no comparator field, that inequality is written into the cell provenance so nothing is lost.

The antimony cell sits on a different basis from the analytes already published, and that is deliberate. Those cells are written on the total content of the impregnating cosmetic liquid, in µg/kg of that liquid as sold; the antimony cell is written on total content in the finished product, because that is the basis the EU criterion uses and the one that can be checked directly on a wipe.

The one government figure that has to be held apart is Korea’s. MFDS Notice No. 2026-23 sets antimony for children’s disposable diapers at 60 mg/kg or less by migration, applied separately to the inner lining and the waterproof layer^[2]. That is a migration test, where this ceiling is a total-content test, and the two measure different quantities. The Korea figure is real precedent that a government limits antimony in a baby product; it is not, and is not used as, the baby-wipes number.

Basis	Figure, as printed	Status
EU Ecolabel absorbent hygiene products, Decision (EU) 2023/1809, Annex I criterion 7.3.8	less than 30 mg/kg total content in the final product	Selected. Voluntary. Entered as 30000 µg/kg. Strictly less than.
Korea MFDS Notice No. 2026-23, children's disposable diapers	Sb 60 mg/kg or less by migration, inner lining and waterproof layer, each	Government precedent in baby products. Migration, not total. Not the ceiling.
EU Ecolabel textiles, Decision 2014/350/EU, criterion 7(a), polyester fibres	shall not exceed 260 ppm	Not selected. Recycled PET bottles are derogated.
EU Ecolabel textiles, Decision 2014/350/EU, criterion 13, Appendix 1 (iv), acid sweat	30,0 mg/kg extractable antimony	Not selected. Extraction EN ISO 105-E04:2013.

Basis	Figure, as printed	Status
United States, diapers, wipes, or textiles	no federal limit for antimony	Not a number.
40 CFR 141.62(b)(11), drinking-water MCL	0.006 mg/L	Orientation only.
Directive (EU) 2020/2184, Annex I, Part B	10 µg/L parametric value	Orientation only.

The evidence the number answers to

The ceiling is the EU Ecolabel figure, 30000 µg/kg. Everything in this section is the evidence that put antimony on the panel in the first place, and none of it is the ceiling. These measurements establish that antimony occurs in baby-wipe materials; they are not used to set the limit.

Washington State Department of Ecology Publication 14-04-014, revised June 2021, measured total elemental antimony in baby-wipe components and in moist baby-wipes packaging ^[5]. Components were prioritised by X-ray fluorescence and confirmed by ICP-MS, so the design is an upper-tail screen of products bought for that study rather than a random sample of the category. The analyte is total elemental antimony, and the report does not speciate Sb(III) from Sb(V). These are occurrence figures, and occurrence does not set a certification cell.

Choi, Song, and Kim 2016 digested approximately 0.2 g and diluted with 25 mL of water, not made up to 25 mL ^[6]. Table 5 prints an antimony range for wet-wipe nonwovens but neither sheet figure in mg/kg, and the conversion to a sheet estimate is uncertain because the methods do not state a made-up final volume. Treating the final volume as 25 mL gives µg/L × 0.125, from mg/kg ≈ (µg/L × 0.025 L / 0.0002 kg) / 1,000, or about 23.48 to 2,444.79 mg/kg; the division by 1,000 is required because the quotient of those inputs is micrograms per kilogram. Treating the digest as 8 mL of acid plus 25 mL of water gives µg/L × 0.165, and a higher top of about 3,227.13 mg/kg. The paper prints neither figure, and neither reading is the certification ceiling. The authors’ attribution of the result to an antimony trioxide or antimony glycolate catalyst is their inference, and it does not hold cleanly for wipes: the highest sheet in Table 5 is labelled rayon only, and several polyester-labelled sheets were not detected, so the polyester-catalyst explanation is a hypothesis here rather than a finding.

The China Association for Quality Promotion of Consumer Products Safety page dated 2 April 2026 reports a detection count for total antimony in online baby wipes, with the annex results table printing the detected row in µg/L ^[7]. That is the unit on the table; it is not a sheet concentration in milligrams per kilogram, and it is not a candidate limit. Brands named on that page are not repeated here.

Biver, Turner, and Filella 2021 measured artificial-sweat release from polyester textiles, not from wipes ^[8]. The extract row is a simulant result under ISO 105-E04, which is neither absorption nor a wipe-sheet total.

Source	Figure, as printed or as derived	What the figure is
WA Ecology 14-04-014, revised June 2021, three baby-wipe components	70.6, 61.3, and 40.6 ppm	Total elemental antimony. Upper-tail screen, not a random sample. Not a candidate limit.
WA Ecology 14-04-014, revised June 2021, moist baby-wipes packaging	95.8 ppm	Total elemental antimony. Not a candidate limit.

Source	Figure, as printed or as derived	What the figure is
Choi, Song, and Kim 2016, Table 5, 12 of 24 wet-wipe nonwovens	187.86 ± 5.24 to $19,558.35 \pm 3,537.3$ $\mu\text{g/L}$	Printed concentration. Not a sheet concentration in mg/kg. Not a candidate limit.
Choi, Song, and Kim 2016, derived reading, final volume treated as 25 mL	about 23.48 to 2,444.79 mg/kg	Not printed. $\mu\text{g/L} \times 0.125$, from mg/kg $\approx (\mu\text{g/L} \times 0.025 \text{ L} / 0.0002 \text{ kg}) / 1,000$. The methods diluted approximately 0.2 g with 25 mL of water, not made up to 25 mL. Not a candidate limit.
Choi, Song, and Kim 2016, derived reading, 8 mL of acid plus 25 mL of water	higher top of about 3,227.13 mg/kg	Not printed. $\mu\text{g/L} \times 0.165$. The paper prints neither sheet figure. Not a candidate limit.
China Association for Quality Promotion of Consumer Products Safety, 2 April 2026	detected in 20 of 21; not detected in one; detected results 15.02 to 450.45 $\mu\text{g/L}$	Annex unit is $\mu\text{g/L}$, in sample order, with no brand names. Not a sheet concentration in milligrams per kilogram. Not a candidate limit.
Biver, Turner, and Filella 2021, six polyester textiles, totals	125 to 471 $\mu\text{g/g}$	Textiles, not wipes. Not a wipe-sheet total.
Biver, Turner, and Filella 2021, artificial-sweat extracts, ISO 105-E04	0.402 ± 0.128 to 2.572 ± 0.031 $\mu\text{g/g}$	Simulant. Not absorption. Not a wipe-sheet total.

What the standard does not claim

The mark on a baby wipe certifies heavy-metal safety, and antimony is now part of what that means: the finished product was tested and its total antimony fell below the EU Ecolabel floor of 30 mg/kg. It is not a claim that a wipe contains no antimony, and no analytical method can certify the absence of an element. It is not a claim built on the occurrence figures above either; those establish that antimony occurs in these materials, and the ceiling comes from a government limit rather than from the spread of the measurements. The evidence is read here as harm reduction rather than alarm: antimony is measurably present in wipe materials, the sovereign floor is a defensible place to hold it, and a caregiver is entitled to a product whose antimony content was actually checked against that floor. The certification decision is made on this side of the program; the Heavy Metal Index remains the literature base, cited one way, and does not set this ceiling [4]. This briefing names no brand.

Common questions

▼ Is 30000 $\mu\text{g/kg}$ a number HMTc made up?

No. It is the antimony floor in the EU Ecolabel for absorbent hygiene products, Commission Decision (EU) 2023/1809, Annex I criterion 7.3.8, which requires antimony below 30 mg/kg in the final product [1]. Thirty mg/kg is 30000 $\mu\text{g/kg}$. The standard binds that figure and discloses that the Ecolabel is voluntary; it originates no number of its own.

▼ Why not use the Korea diaper limit of 60 mg/kg?

Because it measures a different thing. Korea's MFDS Notice No. 2026-23 sets antimony for children's disposable diapers at 60 mg/kg or less by migration, applied separately to the inner lining and the waterproof layer [2]. Migration is how much metal leaves the article under a test; total content is how much is in it. The baby-wipes cell is a total-content test, so the two figures are not interchangeable, and the Korea value is precedent rather than the ceiling.

▼ Do the measured figures in this briefing set the limit?

No. The Washington, Choi, China Association, and Biver figures are occurrence and context, and several are in units that cannot be compared with a finished-product total in mg/kg^{[5][6][7][8]}. They are why antimony is on the panel. The ceiling is the EU Ecolabel total-content figure, and nothing in the certification cell is derived from occurrence.

▼ Does version 2 change the standard's DOI?

No. No products had been certified under version 1.0, its DOI stays live as the previous version at <https://doi.org/10.83138/hmtc.std.2.baby-wipes>^[3], and version 2 deposits no new DOI.

References

Works cited in this briefing's text, in first-appearance order. This is not the full evidence base for the underlying standard; it is only what the prose above draws on. Every range in the briefing is a model built on one of these published anchors. Where a work carries a DOI or a public URL, its title and domain link to it; primary legal documents and published standards are named but not linked to a corpus record.

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| [1] | Commission Decision (EU) 2023/1809, Annex I criterion 7.3.8 | SELECTED |
| | European Commission. (2023). Commission Decision (EU) 2023/1809 of 14 September 2023 establishing the EU Ecolabel criteria for absorbent hygiene products and for reusable menstrual cups. <i>Official Journal of the European Union</i> , L 234, 142. Criterion text: this sub-criterion applies to impurities in the final product. The following chemicals shall not be present in the final product in a concentration higher than what indicated in Table 9. Antimony < 30 mg/kg. Voluntary government floor, disclosed as such. Selected. Entered as 30000 µg/kg. Strictly less than. eur-lex.europa.eu ^[1] | |
| <hr/> | | |
| [2] | Ministry of Food and Drug Safety Notice No. 2026-23 | PRECEDENT |
| | Ministry of Food and Drug Safety. (2026). Standards and specifications for sanitary products (Notice No. 2026-23, revised 24 March 2026; first enacted as Notice No. 2018-19, 21 March 2018). Section 13, disposable diapers: for children's diapers, harmful-element migration of antimony is 60 mg/kg or less, applied separately to the inner lining and the waterproof layer. No DOI. mfds.go.kr ^[2] | |
| <hr/> | | |
| [3] | Baby wipes: HMTc Standard ^[3] | STANDARD |
| | Pendergrass, K. (2026). Baby wipes: HMTc Standard (Version 1.0). Institute of Contaminant Standards. DataCite: version 1.0, publication year 2026, registered 19 September 2026. No volume, no pages, and no separate print date. The house version history dates edition 1.0 to 2026-08-17. This DOI stays live. No products had been certified under it. Version 2 does not deposit a replacement DOI. https://doi.org/10.83138/hmtc.std.2.baby-wipes ^[3] | |
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[4] [Heavy Metal Index](#)

Institute of Contaminant Standards. (n.d.). *Heavy Metal Index*.
<https://heavymetalindex.com>. Literature base cited one way from this
 certification briefing. The Index does not set the baby-wipes antimony
 ceiling. · heavymetalindex.com

[5] **Washington State Department of Ecology Publication 14-04-014, revised June 2021**

GOVERNMENT

Stone, A. (2021). *Metals in children's and consumer products and packaging*
 (Publication No. 14-04-014, rev. June 2021). Washington State Department of
 Ecology. Total elemental antimony at 70.6, 61.3, and 40.6 ppm in three baby-
 wipe components, and 95.8 ppm in moist baby-wipes packaging. Upper-tail
 screen confirmed by ICP-MS after X-ray fluorescence. Not a candidate limit.
apps.ecology.wa.gov

[6] [Determination of heavy metals on the non-woven in wet wipes using ICP-MS](#)

JOURNAL

Choi, S.-M., Song, J.-K., & Kim, S.-J. (2016). Determination of heavy metals on
 the non-woven in wet wipes using ICP-MS. *Journal of the Korean Oil*
Chemists' Society, 33(1), 195-203. Print date 30 March 2016. Crossref records
 no separate online date. Table 5 prints antimony from 187.86 ± 5.24 to
 $19,558.35 \pm 3,537.3$ µg/L in 12 of 24 wet-wipe nonwovens, after digesting
 approximately 0.2 g and diluting with 25 mL of water, not made up to 25 mL.
 The paper prints neither sheet figure. $\times 0.125$, treating the final volume as 25
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 Table 5 is labeled rayon only, and several polyester-labeled sheets were not
 detected. The polyester-catalyst explanation is a hypothesis for wipes, not a
 finding. Neither derived figure is a candidate limit.
<https://doi.org/10.12925/jkocs.2016.33.1.195>

[7] **China Association for Quality Promotion of Consumer Products Safety, 2 April 2026**

REPORT

China Association for Quality Promotion of Consumer Products Safety. (2026,
 April 2). [Monitoring results for total antimony in 21 baby wet wipes sold
 online]. Total antimony detected in 20 of 21 online baby wipes and not
 detected in one. Detected results, in sample order and without brand names,
 run from 15.02 to 450.45 µg/L. Not a candidate limit. cpqs.org.cn

[8] [Antimony release from polyester textiles by artificial sweat solutions: A call for a standardized procedure](#)

JOURNAL

Biver, M., Turner, A., & Filella, M. (2021). Antimony release from polyester textiles by artificial sweat solutions: A call for a standardized procedure. Regulatory Toxicology and Pharmacology, 119, Article 104824. Print issue February 2021. Crossref records no separate online date. The DOI article number is from 2020; the citation year is the 2021 issue year. Six polyester textiles, not wipes. Totals 125 to 471 µg/g. Extracts under ISO 105-E04, 0.402 ± 0.128 to 2.572 ± 0.031 µg/g. Simulant, not absorption, and not a wipe-sheet total. <https://doi.org/10.1016/j.yrtph.2020.104824>

[9] Commission Decision 2014/350/EU

NOT SELECTED

European Commission. (2014). Commission Decision 2014/350/EU establishing the ecological criteria for the award of the EU Ecolabel for textile products. Criterion 7(a): the level of antimony present in the polyester fibres shall not exceed 260 ppm. Polyester fibres manufactured from recycled PET bottles are derogated. Criterion 13, Appendix 1, point (iv) Extractable metals: antimony 30,0 mg/kg, extraction EN ISO 105-E04:2013 (acid sweat solution), for products intended for babies and children under 3 years old and for all other products. Decision (EU) 2017/1392 replaced that extractable-metals entry and left antimony at 30,0 mg/kg. No DOI. Not selected. eur-lex.europa.eu

[10] 40 CFR 141.62(b)(11)

ORIENTATION

Maximum contaminant levels for inorganic contaminants, 40 C.F.R. § 141.62(b)(11) (2025). Antimony, 0.006 mg/L. No federal limit for antimony in diapers, wipes, or textiles was identified. The drinking-water figure is orientation only. No DOI. ecfr.gov

[11] Directive (EU) 2020/2184, Annex I, Part B

ORIENTATION

European Parliament and Council. (2020). Directive (EU) 2020/2184 on the quality of water intended for human consumption (recast), Annex I, Part B, chemical parameters. Antimony, parametric value 10 µg/L. Orientation only. Not a sheet total. No DOI. eur-lex.europa.eu

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