Peach

Karen Pendergrass · Heavy Metal Index, Institute of Contaminant Standards

HEAVY METAL INDEX · INGREDIENT PROFILE October 2026

DOI 10.83376/hmi.ingredient.peach

CITE AS

Pendergrass, K. (2026). Peach. Heavy Metal Index. https://doi.org/10.83376/hmi.ingredient.peach

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 2026-10-22.

Abstract

Peach in the HMI library has 283 reported results for lead, cadmium, total arsenic, inorganic arsenic, dimethylarsinic acid, total mercury, nickel, chromium, aluminum, tin, antimony, uranium, Co, Cu, Fe, Mn, Zn, V, Se, Ba and Mo from 21 sources. WHO gems/food submissions reported lead in peach as sold from 2,188 results in 4 reporting regions, with subgroup medians from 2.4 to 720 µg/kg. In the US Total Diet Study, frozen peach had a median lead result below 4 µg/kg across 27 composites from 2017-2020.

1 | Peach overview

Across 2 other studies of ordinary farms and markets, reported lead means and medians on an as-sold or fresh-weight basis ranged from 41.2 µg/kg (Lee et al. 2023) to 2,750 µg/kg (Volpe et al. 2012).[4,6] For cadmium, 2 studies on a dry-weight basis reported means and medians from 20 µg/kg (Elbagermi et al. 2012) to 50.7 µg/kg (Rahim et al. 2020).[7,8]

For a buyer the practical points are the form bought, the basis a result is reported on, where the peach came from and the laboratory's reporting limit. Testing finds contamination but does not remove it.

2 | What counts as peach

This page covers peach in 6 forms kept separate in every comparison: peach as sold (217 results), canned peach (30 results), peach juice (15 results), dried peach (7 results), frozen peach (7 results) and peach peel or outer layer (7 results).[1,2,3,4,5,6]

Results stay on the basis each source reports: as sold or fresh weight, dry weight, or unstated. Dry-weight, as-sold and unstated results are never pooled, and no moisture conversion is applied.

3 | How metals reach peach

No study in the library compared peach from contaminated and ordinary settings, so the routes by which metals reach it are not measured here.

4 | Which forms and regions measured lower

The hmi reference for lead in peach as sold pools 157 subgroup units from 3 sampling families, with a median of between 2.4 and 4.3 µg/kg and a middle half spanning between 1.8 and 2.4 (lower quartile) and between 4.5 and 7.4 µg/kg (upper quartile).[1,3,5] frozen for lead in peach, the reference median was below 4 µg/kg, with a middle half from below 4 to below 4 µg/kg across 27 units.[2] for lead in peach juice, the reference median was 12.5 µg/kg, with a middle half from between 3.42 and 3.67 to 22.9 µg/kg across 4 units.[1]

Among GEMS/Food reporting regions, peach as sold had the lowest lead subgroup median in PAHO (2.4 µg/kg) and the highest in WPRO (720 µg/kg); reporting regions are markets, not growing areas.[1] For cadmium, the lowest regional median was in EURO (1 µg/kg) and the highest in EURO (60 µg/kg).[1]

In one study, lead across 6 groups of peach ranged from 55.5 µg/kg (Toronto 1988) to 196 µg/kg (Montreal 1988); the lowest is the lowest observed in that study, not an established sourcing preference.[10]

5 | Processing, cooking and preparation

Processed or prepared forms were compared only with unprocessed peach in the same study and group. Canned peach (5 city composites) had lead higher at 143 µg/kg, against 14.8 µg/kg for the unprocessed form in the same group (peach as sold).[10] In another study, peach juice (PAHO) had lead higher at 16.6 µg/kg, against 2.4 µg/kg for the unprocessed form in the same group (peach as sold).[1] a third study found that peach peel or outer layer (local market, Quetta; brought from Sawat; June-July 2019) had lead lower at 135 µg/kg, against 824 µg/kg for the unprocessed form in the same group (peach as sold).[11]

Forms differ in water content, so a per-kilogram difference is not by itself a measured removal or gain of metal.

6 | Mitigation for peach

Lot testing against the applicable limit is the check that can be verified.

7 | Trade-offs and limits of controls

Metals do not move together, so a lot that passes a lead limit says little about cadmium, arsenic or nickel unless those are tested as well.

8 | Testing peach for metals

Results depend on the method and its reporting limit. Reporting limits for lead ranged from 0.4 µg/kg (WHO GEMS/Food) to 3,000 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1] Reporting limits for cadmium ranged from 0.1 µg/kg (Nie et al. 2016) to 1,000 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1,12] Reporting limits for total arsenic ranged from 2 µg/kg (WHO GEMS/Food) to 300 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1]

A useful lot result names the form, the basis and a quantification limit well below the limit that applies.

9 | Buying and verifying peach

No maximum level for metals in peach was verified from primary text for this page; buyers should confirm the limit that applies in the destination market.

10 | Exposure from peach

No source in the library converted peach concentrations into a verified estimate of intake for a defined population. Concentrations describe the food, not individual risk.

11 | Evidence review and remaining gaps

Every source record that names peach was decided on its content: 21 occurrence extracted, 21 records in all. The occurrence table renders every extracted result; held values remain visible with their reason.

References identify the sources used in these answers. The Sources index preserves additional discovery links; inclusion there does not mean a source has been reviewed for this assessment. Corrections, completed searches, new direct evidence and changes in requirements should reopen the relevant answer.

12 | Peach FAQs

The library reports lead, cadmium, total arsenic, inorganic arsenic, dimethylarsinic acid, total mercury, nickel, chromium, aluminum, tin, antimony, uranium, Co, Cu, Fe, Mn, Zn, V, Se, Ba and Mo in peach, most often lead, cadmium and total arsenic.[1,2,3,4] WHO gems/food submissions reported lead in peach as sold from 2,188 results in 4 reporting regions, with subgroup medians from 2.4 to 720 µg/kg.[1]

Among GEMS/Food reporting regions, peach as sold had the lowest lead subgroup median in PAHO (2.4 µg/kg) and the highest in WPRO (720 µg/kg); reporting regions are markets, not growing areas.[1] For cadmium, the lowest regional median was in EURO (1 µg/kg) and the highest in EURO (60 µg/kg).[1]

Only comparisons between forms in the same study are available, not before-and-after measurements of the same peach.[10] canned peach (5 city composites) had lead higher at 143 µg/kg, against 14.8 µg/kg for the unprocessed form in the same group (peach as sold).[10]

Inorganic arsenic, the more toxic form, was measured in 9 results from 2 sources, far fewer than total arsenic.[1,13] WHO GEMS/Food submissions reported inorganic arsenic in peach as sold from 31 results in 2 reporting regions, with a subgroup median of 7.22 µg/kg.[1]

References

[1] GEMS/Food Contaminants database heavy-metal exports
World Health Organization · GEMS/Food Contamination Monitoring and Assessment Programme · 2026 · extranet.who.int
DATASET

[2] FY2018-FY2020 TDS Elements Analytical Results
U.S. Food and Drug Administration · FDA Total Diet Study · 2022 · www.fda.gov
DATASET

[3] What's in My Baby's Food? A National Investigation Finds 95 Percent of Baby Foods Tested Contain Toxic Chemicals That Lower Babies' IQ, Including Arsenic and Lead
Jane Houlihan and Charlotte Brody · Healthy Babies Bright Futures · 2019 · www.hbbf.org
NGO

[4] Occurrence and health risk assessment of antimony, arsenic, barium, cadmium, chromium, nickel, and lead in fresh fruits consumed in South Korea
Lee J, Hwang I, Park YS, and Lee DY · Applied Biological Chemistry · 2023 · doi.org/10.1186/s13765-023-00799-x
PEER-REVIEWED

[5] Analytical Results for Arsenic, Lead, Cadmium, and Mercury in Food Intended for Babies and Young Children - TEP (FY2009-FY2024)
U.S. Food and Drug Administration · FDA analytical results table · 2024 · www.fda.gov
DATASET

[6] Determination and assessments of selected heavy metals in eye shadow cosmetics
Volpe MG, Nazzaro M, Coppola R, Rapuano F, and Aquino RP · Microchemical Journal · 2012 · doi.org/10.1016/j.microc.2011.10.008
PEER-REVIEWED

[7] Monitoring of Heavy Metal Content in Fruits and Vegetables Collected from Production and Market Sites in the Misurata Area of Libya
Elbagermi MA, Edwards HGM, and Alajtal AI · ISRN Analytical Chemistry · 2012 · doi.org/10.5402/2012/827645
PEER-REVIEWED

[8] Analysis of Toxic Heavy Metal Content of the Most Widely Consumed Fruits
Rahim M, Saqib NU, Wahid F, Khan N, and Alrawi LI · Journal of Physical Science · 2020 · doi.org/10.21315/jps2020.31.2.5
PEER-REVIEWED

[9] Essential elements in the different type of fruits, soil and water samples collected from Markazi province, Iran: a health risk assessment study
Mohammad Rezaei, Yousef Fakhri, Maryam Abtahi, Majid Keramati, Gholamreza Ghasemi, Mohammad H. Moradi, et al. · Quality Assurance and Safety of Crops & Foods · 2020 · doi.org/10.15586/qas.v12i3.777
PEER-REVIEWED

[10] Survey of Lead, Cadmium, Fluoride, Nickel, and Cobalt in Food Composites and Estimation of Dietary Intakes of These Elements by Canadians in 1986-1988
Dabeka RW and McKenzie AD · Journal of AOAC International · 1995 · academic.oup.com
PEER-REVIEWED

[11] Detection of Heavy metals in Fruits and Vegetables available in the Market of Quetta city
Nisa KU, Samiullah, Khan N, and Attiq-ur-Rehman · Al-Nahrain Journal of Science 23(1):47-56 · 2020 · doi.org/10.22401/anjs.23.1.07
PEER-REVIEWED

[12] Assessing the concentration and potential health risk of heavy metals in China's main deciduous fruits
Nie JY, Kuang LX, Li ZX, Xu WH, Wang C, Chen QS, et al. · Journal of Integrative Agriculture 2016, 15(7): 1645-1655 · 2016 · doi.org/10.1016/S2095-3119(16)61342-461342-4)
PEER-REVIEWED

[13] The First Hong Kong Total Diet Study: Inorganic Arsenic
Centre for Food Safety FEHD HKSAR · Centre for Food Safety, Food and Environmental Hygiene Department, Government of the Hong Kong Special Administrative Region · 2012 · www.cfs.gov.hk
GOVERNMENT

STATUS AND LICENCE

Editorially reviewed in-house; no external peer review has been completed on this ingredient profile. Published as an institutional technical report with its review state tracked on the article page. Released under CC BY 4.0.

COMPETING INTERESTS

The Heavy Metal Index reports what the peer-reviewed and regulatory literature supports. It is operated separately from any certification program, does not evaluate or endorse

brands, and does not use certification thresholds as evidence for the statements made here.

DATA AVAILABILITY

Every source behind this ingredient profile is listed with its own source record at https://heavymetalindex.com/ingredients/peach#sources.

PUBLICATION HISTORY

This revision 2026-10-22. The full dated record is maintained at https://heavymetalindex.com/ingredients/peach.