Turkey

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CORRESPONDENCE

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Abstract

Turkey in the HMI library has 78 reported results for lead, cadmium, total arsenic, inorganic arsenic, total mercury, nickel, chromium, aluminum, tin, uranium, Co, Cu, Zn, Se, As_nonextractable, AsIII, AsV and CrIII from 9 sources. WHO gems/food submissions reported lead in turkey as sold from 2,165 results in 3 reporting regions, with a subgroup median of 2.75 µg/kg. In the US Total Diet Study, cooked turkey had a median lead result below 4 µg/kg across 27 composites from 2017-2020.

1 | Turkey overview

Cantoral et al. 2024 reported lead at 26 µg/kg (mean ± 10 SD) in turkey as sold from Meats, sausages, and eggs (retail, Mexico City).[4] Raeeszadeh et al. 2021 reported cadmium at 290 µg/kg (mean ± 130 SD) and total arsenic at 880 µg/kg (mean ± 210 SD) in turkey as sold from Sanandaj distribution centers.[3]

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

2 | What counts as turkey

This page covers turkey in 3 forms kept separate in every comparison: turkey as sold (60 results), cooked turkey (9 results) and turkey powder or ground (9 results).[1,2,3,4,5,6] Foods made from turkey that have their own pages, such as turkey luncheon meat, are covered there.

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 turkey

No study in the library compared turkey 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 cooked hmi reference for lead in turkey pools 55 subgroup units from 2 sampling families, with a median of below 4 µg/kg and a middle half spanning below 4 (lower quartile) and below 4 µg/kg (upper quartile).[2,5] for lead in turkey as sold, the reference median was below 7 µg/kg, with a middle half from below 5.38 to below 20 µg/kg across 49 units.[1] cooked for cadmium in turkey, the reference median was below 1 µg/kg, with a middle half from below 1 to below 1 µg/kg across 55 units.[2,5]

5 | Processing, cooking and preparation

No processing study for metals in this food is in the library yet.

6 | Mitigation for turkey

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 turkey for metals

Results depend on the method and its reporting limit. Reporting limits for lead ranged from 2 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 0.4 µg/kg (WHO GEMS/Food) to 1,000 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1] Reporting limits for total arsenic ranged from 3 µg/kg (FDA Total Diet Study) to 100 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1,2]

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

9 | Buying and verifying turkey

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

10 | Exposure from turkey

No source in the library converted turkey 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 turkey was decided on its content: 9 occurrence extracted, 9 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 | Turkey FAQs

The library reports lead, cadmium, total arsenic, inorganic arsenic, total mercury, nickel, chromium, aluminum, tin, uranium, Co, Cu, Zn, Se, As_nonextractable, AsIII, AsV and CrIII in turkey, most often lead, cadmium and total arsenic.[1,2,3,4] WHO gems/food submissions reported lead in turkey as sold from 2,165 results in 3 reporting regions, with a subgroup median of 2.75 µg/kg.[1]

Inorganic arsenic, the more toxic form, was measured in 2 results from 2 sources, far fewer than total arsenic.[1,7] European Food Safety Authority (EFSA) 2014 reported inorganic arsenic at 7.5 µg/kg (mean) in turkey as sold from European dietary-survey occurrence data.[7]

References

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World Health Organization · GEMS/Food Contamination Monitoring and Assessment Programme · 2026 · extranet.who.int
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[2] FY2018-FY2020 TDS Elements Analytical Results
U.S. Food and Drug Administration · FDA Total Diet Study · 2022 · www.fda.gov
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[3] Determination of some heavy metals concentration in species animal meat (sheep, beef, turkey, and ostrich) and carcinogenic health risk assessment in Kurdistan province, western Iran
Raeeszadeh M, Gravandi H, and Akbari A · Research Square · 2021 · doi.org/10.21203/rs.3.rs-407310/v1
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[4] Lead Levels in the Most Consumed Mexican Foods: First Monitoring Effort
Cantoral A, Betanzos-Robledo L, Collado-López S, García-Martínez BA, Lamadrid-Figueroa H, Mariscal-Moreno RM, et al. · Toxics · 2024 · doi.org/10.3390/toxics12050318
PEER-REVIEWED

[5] Infants' and young children's dietary exposures to lead and cadmium: FDA total diet study 2018-2020
Spungen JH and et al. · Food Additives & Contaminants: Part A · 2024 · doi.org/10.1080/19440049.2024.2396910
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Joint FAO/WHO Expert Committee on Food Additives · WHO Food Additives Series, No. 82 (Safety evaluation of certain contaminants in food, prepared by the 91st meeting of JECFA) · 2022 · www.who.int
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European Food Safety Authority (EFSA) · EFSA Journal 2014;12(3):3597 · 2014 · doi.org/10.2903/j.efsa.2014.3597
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STATUS AND LICENCE

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DATA AVAILABILITY

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

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.

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