Poultry

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Abstract

Poultry in the HMI library has 374 reported results for lead, cadmium, total arsenic, inorganic arsenic, total mercury, nickel, chromium, aluminum, tin, antimony, Co, Cu, Fe, Mn, Zn, Se, Ag, As_nonextractable, AsIII, AsV, B, Ba, I, Mo, Sr and Tl from 31 sources. WHO gems/food submissions reported lead in poultry as sold from 465 results in 4 reporting regions, with subgroup medians from 1.39 to 50 µg/kg. For cadmium, GEMS/Food gave subgroup medians from 2.5 to 9 µg/kg from 1,384 results.

1 | Poultry overview

Across 4 other studies of ordinary farms and markets, reported lead means and medians on an as-sold or fresh-weight basis ranged from 1.5 µg/kg (ANSES 2026) to 784 µg/kg (Baxter et al. 2025).[2,7] For cadmium, 4 studies on an as-sold or fresh-weight basis reported means and medians from 1 µg/kg (Szkoda et al. 2013) to 260 µg/kg (Baxter et al. 2025).[6,7]

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

2 | What counts as poultry

This page covers poultry in 3 forms kept separate in every comparison: poultry as sold (282 results), dried poultry (70 results) cooked and poultry (22 results).[1,2,3,4,5,6] Foods made from poultry that have their own pages, such as meat and poultry, 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 poultry

No study in the library compared poultry 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 poultry as sold pools 47 subgroup units from 2 sampling families, with a median of 2 µg/kg and a middle half spanning below 2 (lower quartile) and between 2 and 10 µg/kg (upper quartile).[1,6] for cadmium in poultry as sold, the reference median was below 1 µg/kg, with a middle half from below 1 to below 5 µg/kg across 69 units.[1,6] for total arsenic in poultry as sold, the reference median was below 2 µg/kg, with a middle half from below 2 to below 7.5 µg/kg across 37 units.[1,6]

Among GEMS/Food reporting regions, poultry as sold had the lowest lead subgroup median in PAHO (1.39 µg/kg) and the highest in EURO (50 µg/kg); reporting regions are markets, not growing areas.[1] For cadmium, the lowest regional median was in WPRO (2.5 µg/kg) and the highest in AFRO (9 µg/kg).[1] For total arsenic, the lowest regional median was in AFRO (2 µg/kg) and the highest in EURO (16.5 µg/kg).[1]

In one study, lead across 4 groups of poultry ranged from 1.39 µg/kg (PAHO) to 50 µg/kg (EURO); the lowest is the lowest observed in that study, not an established sourcing preference.[1] In another study, lead across 4 groups of poultry ranged from 0.13 µg/kg (domestic farm 7, Akmola region (9 samples)) to 124 µg/kg (domestic farm 8, Akmola region (2 samples)); 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 poultry in the same study and group. Cooked poultry (5 city composites) had lead lower at 10.9 µg/kg, against 11.4 µg/kg for the unprocessed form in the same group (poultry 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 poultry

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 poultry 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 70 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1] Reporting limits for cadmium ranged from 0.3 µg/kg (WHO GEMS/Food) to 100 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 1 µg/kg

(WHO GEMS/Food) to 100 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 poultry

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

10 | Exposure from poultry

No source in the library converted poultry 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 poultry was decided on its content: 31 occurrence extracted, 31 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 | Poultry FAQs

The library reports lead, cadmium, total arsenic, inorganic arsenic, total mercury, nickel, chromium, aluminum, tin, antimony, Co, Cu, Fe, Mn, Zn, Se, Ag, As_nonextractable, AsIII, AsV, B, Ba, I, Mo, Sr and Tl in poultry, most often lead, cadmium and total arsenic.[1,2,3,4] WHO gems/food submissions reported lead in poultry as sold from 465 results in 4 reporting regions, with subgroup medians from 1.39 to 50 µg/kg.[1]

Among GEMS/Food reporting regions, poultry as sold had the lowest lead subgroup median in PAHO (1.39 µg/kg) and the highest in EURO (50 µg/kg); reporting regions are markets, not growing areas.[1] For cadmium, the lowest regional median was in WPRO (2.5 µg/kg) and the highest in AFRO (9 µg/kg).[1]

Only comparisons between forms in the same study are available, not before-and-after measurements of the same poultry.[11] cooked poultry (5 city composites) had lead lower at 10.9 µg/kg, against 11.4 µg/kg for the unprocessed form in the same group (poultry as sold).[11]

Inorganic arsenic, the more toxic form, was measured in 7 results from 5 sources, far fewer than total arsenic.[1,4,12,13,14] Across 2 other studies of ordinary farms and markets, reported inorganic arsenic means and medians on an as-sold or fresh-weight basis ranged from 3 µg/kg (Food Standards Agency 2014) to 12.5 µg/kg (Committee on Toxicity of Chemicals in Food 2003).[4,12]

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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/poultry#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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