Lamb chop

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Abstract

Lamb chop in the HMI library has 141 reported results for lead, cadmium, total arsenic, inorganic arsenic, dimethylarsinic acid, total mercury, methylmercury, nickel, chromium, aluminum, tin, antimony, uranium, Co, Cu, Zn, Ba and Tl from 9 sources. WHO GEMS/Food submissions reported lead in lamb chop as sold from 4,517 results in 3 reporting regions, with subgroup medians below 2,500 µg/kg, mostly non-detects. In the US Total Diet Study, lamb chop oil had a median lead result below 4 µg/kg across 27 composites from 2017-2020.

1 | Lamb chop 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 2.1 µg/kg (Spungen et al. 2024) to 3.8 µg/kg (Marín et al. 2018).[3,7] For cadmium, 2 studies with the basis not stated reported means and medians from 1.29 µg/kg (Dabeka et al. 1995) to 1.55 µg/kg (Dabeka et al. 1995).[6]

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

2 | What counts as lamb chop

This page covers lamb chop in 4 forms kept separate in every comparison: lamb chop as sold (119 results), cooked lamb chop (10 results), lamb chop oil (8 results) frozen and lamb chop (4 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 lamb chop

No study in the library compared lamb chop 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 lamb chop as sold pools 50 subgroup units from 1 sampling family, with a median of below 10 µg/kg and a middle half spanning below 10 (lower quartile) and below 20 µg/kg (upper quartile).[1] for lead in lamb chop oil, 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 cadmium in lamb chop as sold, the reference median was below 5 µg/kg, with a middle half from below 2 to below 6 µg/kg across 58 units.[1]

Among GEMS/Food reporting regions, lamb chop as sold had the lowest cadmium subgroup median in EURO (31.5 µg/kg) and the highest in EURO (90 µg/kg); reporting regions are markets, not growing areas.[1]

5 | Processing, cooking and preparation

Processed or prepared forms were compared only with unprocessed lamb chop in the same study and group. Cooked lamb chop (5 city composites) had lead lower at 8.6 µg/kg, against 9.2 µg/kg for the unprocessed form in the same group (lamb chop as sold).[6]

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

6 | Mitigation for lamb chop

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 lamb chop for metals

Results depend on the method and its reporting limit. Reporting limits for lead ranged from 2 µg/kg (WHO GEMS/Food) to 5,000 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1] Reporting limits for cadmium ranged from 0.8 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 lamb chop

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

10 | Exposure from lamb chop

No source in the library converted lamb chop 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 lamb chop 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 | Lamb chop FAQs

The library reports lead, cadmium, total arsenic, inorganic arsenic, dimethylarsinic acid, total mercury, methylmercury, nickel, chromium, aluminum, tin, antimony, uranium, Co, Cu, Zn, Ba and Tl in lamb chop, most often lead, cadmium and total arsenic.[1,2,3,4] WHO GEMS/Food submissions reported lead in lamb chop as sold from 4,517 results in 3 reporting regions, with subgroup medians below 2,500 µg/kg, mostly non-detects.[1]

Among GEMS/Food reporting regions, lamb chop as sold had the lowest cadmium subgroup median in EURO (31.5 µg/kg) and the highest in EURO (90 µg/kg); reporting regions are markets, not growing areas.[1]

Only comparisons between forms in the same study are available, not before-and-after measurements of the same lamb chop.[6] cooked lamb chop (5 city composites) had lead lower at 8.6 µg/kg, against 9.2 µg/kg for the unprocessed form in the same group (lamb chop as sold).[6]

Inorganic arsenic, the more toxic form, was measured in 5 results from 3 sources, far fewer than total arsenic.[1,3,5] Marín et al. 2018 reported inorganic arsenic at 0.3 µg/kg (mean) in lamb chop as sold from Meat and meat products group, Region of Valencia TDS 2010-2011.[3]

References

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COMPETING INTERESTS

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DATA AVAILABILITY

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

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