Leeks

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Abstract

Leeks in the HMI library has 167 reported results for lead, cadmium, total arsenic, inorganic arsenic, total mercury, nickel, chromium, aluminum, tin, Co, Cu, Fe, Mn, Zn, V, As, Sr and Ti from 14 sources. WHO gems/food submissions reported lead in leeks as sold from 1,187 results in 3 reporting regions, with subgroup medians from 7.2 to 300 µg/kg. For cadmium, GEMS/Food gave subgroup medians from 8.66 to 30 µg/kg from 936 results.

1 | Leeks 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 5.5 µg/kg (Norton et al. 2015) to 40 µg/kg (Heshmati et al. 2020).[2,3] For cadmium, 2 studies on an as-sold or fresh-weight basis reported means and medians from 10.7 µg/kg (Norton et al. 2015) to 26.3 µg/kg (Norton et al. 2015).[3]

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

2 | What counts as leeks

This page covers leeks as sold (167 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 leeks

No study in the library compared leeks 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 leeks as sold pools 42 subgroup units from 1 sampling family, with a median of between 1.48 and 20 µg/kg and a middle half spanning below 8 (lower quartile) and between 21 and 40 µg/kg (upper quartile).[1] for cadmium in leeks as sold, the reference median was between 11.3 and 11.5 µg/kg, with a middle half from 10.7 to 18.4 µg/kg across 32 units.[1,3] for total arsenic in leeks as sold, the reference median was below 10 µg/kg, with a middle half from below 5 to between 1.71 and 20 µg/kg across 28 units.[1]

Among GEMS/Food reporting regions, leeks as sold had the lowest lead subgroup median in PAHO (7.2 µg/kg) and the highest in EURO (300 µg/kg); reporting regions are markets, not growing areas.[1] For cadmium, the lowest regional median was in EURO (8.66 µg/kg) and the highest in EURO (30 µg/kg).[1]

5 | Processing, cooking and preparation

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

6 | Mitigation for leeks

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 leeks for metals

Results depend on the method and its reporting limit. Reporting limits for lead ranged from 0.35 µg/kg (Heshmati et al. 2020) to 300 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1,2] Reporting limits for cadmium ranged from 0.1 µg/kg (Al-Salimi et al. 2026) to 50 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method says much less.[1,5] Reporting limits for total arsenic ranged from 2.79 µg/kg (Altıkulaç et al. 2025) to 300 µg/kg (WHO GEMS/Food), so a non-detect from a less sensitive method s ays much less.[1,8]

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

9 | Buying and verifying leeks

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

10 | Exposure from leeks

No source in the library converted leeks 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 leeks was decided on its content: 14 occurrence extracted, 14 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 | Leeks FAQs

The library reports lead, cadmium, total arsenic, inorganic arsenic, total mercury, nickel, chromium, aluminum, tin, Co, Cu, Fe, Mn, Zn, V, As, Sr and Ti in leeks, most often lead, cadmium and total arsenic.[1,2,3,4] WHO gems/food submissions reported lead in leeks as sold from 1,187 results in 3 reporting regions, with subgroup medians from 7.2 to 300 µg/kg.[1]

Among GEMS/Food reporting regions, leeks as sold had the lowest lead subgroup median in PAHO (7.2 µg/kg) and the highest in EURO (300 µg/kg); reporting regions are markets, not growing areas.[1] For cadmium, the lowest regional median was in EURO (8.66 µg/kg) and the highest in EURO (30 µg/kg).[1]

Inorganic arsenic, the more toxic form, was measured in 3 results from 2 sources, far fewer than total arsenic.[1,9] European Food Safety Authority (EFSA) 2014 reported inorganic arsenic at 5.4 µg/kg (mean) in leeks as sold from European dietary-survey occurrence data.[9]

References

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DATASET

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PEER-REVIEWED

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[6] Contamination Alert: Microbial and Heavy Metal Levels in Green Vegetables
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GOVERNMENT

STATUS AND LICENCE

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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/leeks#sources.

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