# Maximum levels of arsenic in certain foods

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EU lowers levels of arsenic in some types of rice, and fixes new levels in some rice products, infant foods, fruit juices and salt

Commission Regulation (EU) 2023/465 of 3 March 2023 amending Regulation (EC) No 1881/2006 as regards maximum levels of arsenic in certain foods

## Update

The EU has reduced the existing maximum levels for inorganic arsenic in non-parboiled milled rice, and established new maximum levels for inorganic arsenic in rice flour, rice-based drinks, food for infants and young children, fruit juices, concentrated fruit juices and nectars, and salt.

## Impacted products

milled rice, rice flour, rice-based drinks, fruit juices, nectars, salt

## What is changing?

The EU has lowered existing maximum levels for inorganic arsenic in non-parboiled milled rice, and established new maximum levels for inorganic arsenic in certain other foods. It has also aligned the maximum level in salt to the Codex Alimentarius standard. The amendments to existing maximum levels are shown in Table 1.

This Regulation amends Regulation (EC) 1881/2006 (subsequently replaced by Regulation (EU) 2023/915).

## Why?

Inorganic arsenic is associated with lung, bladder and skin cancer. EFSA (2021) concluded that a risk to consumers cannot be excluded at exposure rates between 0.3 and 8 µg/kg body weight per day. New, lower maximum levels are therefore appropriate for commodities contributing to exposure to arsenic.

## Timeline

Date of application: 26 March 2023.

Products lawfully placed on the market before 26 March 2023 in compliance with the old maximum levels (or for which no maximum levels existed before that date) may remain on the market after that date even where not compliant with the new levels.

## What are the major implications for exporting countries?

Suppliers of food for infants and young children, fruit juices and salt will have to introduce systematic monitoring of products intended for the EU market for the presence of arsenic.

## Recommended Actions

Exporters should review existing levels of arsenic in export products affected by the Regulation and, if levels exceed the EU's limits, identify and reduce them.

Information on recommended methods and performance criteria for analysis of arsenic in foodstuffs can be found in Commission Regulation 2016/582

## Background

In 2010 the Joint FAO/WHO Expert Committee on Food Additives (JECFA) withdrew its provisional tolerable weekly intake of arsenic (15 µg/kg body weight) after adverse effects were reported at lower levels of exposure (EFSA 2014). Based on epidemiological studies, JEFCA established an increased risk of lung cancer at the benchmark dose lower confidence limit of 3.0 µg/kg bw per day (EFSA 2021).

EFSA (2014) identified that grain-based products are the main source of dietary exposure to inorganic arsenic in the European population. Rice, milk and dairy products were also important sources. Significant uncertainties remained in the assessment, so Commission Regulation (EU) 2015/1006 set maximum levels for inorganic arsenic only in rice and rice-based products.

EFSA (2021) reassessed chronic dietary exposure to inorganic arsenic, taking into account the more recent and detailed exposure data in a wider range of foodstuffs. Dietary exposure estimates in that report were considerably lower than those reported previously (EFSA 2009), but EFSA concluded that rice, rice-based products, grains and grain-based products not containing rice, and drinking water remain the main contributors to exposure. A range of foodstuffs for infants and young children also contribute to dietary exposure. Children under 3

years old are the most exposed to inorganic arsenic.

## Resources

Commission Regulation (EU) 2023/915 of 25 April 2023 on maximum levels for certain contaminants in food and repealing Regulation (EC) No 1881/2006

EFSA (2009) Scientific opinion on arsenic in food. EFSA Journal, 7(10): 1351.

EFSA (2014) Dietary exposure to inorganic arsenic in the European population. EFSA Journal, 12(3): 3597.

EFSA (2021) Chronic dietary exposure to inorganic arsenic. EFSA Journal, 19(1): 638.

## Sources

Regulation (EU) 2023/465 regarding maximum levels of arsenic in certain foods

Visit the AGRINFO website to view the latest AGRINFO Update newsletters and search the database.

## Table & Figures

| Table 1<br>Maximum levels of arsenic in certain foods | | |
|---|---|---|
| Foodstuffs | Arsenic (inorganic) maximum level (mg/kg wet weight) | |
| | New | Current |
| Cereals and cereal based products | | |
| Non-parboiled milled rice (polished or white rice) | 0.15 | 0.20 |
| Parboiled and husked rice | 0.25 | 0.25 |
| Rice flour | 0.25 | – |
| Rice waffles, rice wafers, rice crackers, rice cakes, rice flakes and popped breakfast rice | 0.30 | 0.30 |
| Rice destined for the production of food for infants and young children | 0.10 | 0.10 |
| Non-alcoholic rice–based drinks | 0.030 | – |
| Infant formulae, follow–on formulae, foods for special medical purposes intended for infants and young children, and young child formulae | | |
| • marketed as powder | 0.020 | – |
| • marketed as liquid | 0.010 | – |
| Baby foods | 0.020 | – |
| Fruit juices, concentrated fruit juices as reconstituted, fruit nectars | 0.020 | – |
| Salt | Arsenic (total) (mg/kg wet weight) | |
| | New | Current |
| | 0.50 | – |
| AGRINFO www.agrinfo.eu | | |

Source: based on Regulation 2023/465

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