

FOOD REGULATORY SCIENCE UPDATE

Global Safety Reaffirmed for Acesulfame Potassium (E 950)

ADI Set at 15 mg/kg Body Weight

The Global Food Regulatory Science Society ([GFRSS](#)) as the Disciplinary Group on Food Regulatory Science of the International Union of Food Science and Technology ([IUFOST](#)) would like to share the latest international regulatory update on **Acesulfame Potassium (E 950)**.

The European Food Safety Authority ([EFSA](#)) has recently completed its re-evaluation of acesulfame potassium (E 950), a widely used artificial sweetener, reaffirming its safety for consumption within established limits.

Updated Acceptable Daily Intake (ADI)

EFSA's Panel on Food Additives and Flavourings has set a new Acceptable Daily Intake (**ADI**) for acesulfame K at **15 mg/kg body weight per day**¹. This revision is based on a No Observed Adverse Effect Level (**NOAEL**) of **1,500 mg/kg body weight per day**, applying a standard uncertainty factor of 100. The previous ADI, established by the Scientific Committee on Food in 2000, was 9 mg/kg body weight per day.

Despite the increased ADI, EFSA does not anticipate changes to the maximum permitted levels of acesulfame K in food products. EFSA's comprehensive review also included an evaluation of acesulfame K's genotoxicity and its degradation products. The assessment concluded that there are no safety concerns regarding genotoxicity for acesulfame K and its breakdown products.

EFSA's recent re-assessment aligns with findings of other food regulatory authorities and risk assessment bodies reaffirming the **Acceptable Daily Intake (ADI)** for Acesulfame Potassium at **15 mg/kg body weight/day**, as detailed below:

- **Joint FAO/WHO Expert Committee on Food Additives (JECFA)**²: Established the ADI of 0–15 mg/kg bw/day during its 37th meeting.

¹ [Re-evaluation of acesulfame K \(E 950\) as food additive](#)

² <https://iris.who.int/handle/10665/38203>

- **Health Canada**³: Recognizes an ADI of 15 mg/kg bw/day for Acesulfame Potassium.
- **Food Standards Australia New Zealand (FSANZ)**⁴: Adopts the JECFA-established ADI of 15 mg/kg bw/day.
- **U.S. Food and Drug Administration (FDA)**⁵: Approves Acesulfame Potassium with an ADI of 15 mg/kg bw/day.

What does this ADI mean?

To contextualize the ADI, consider a person weighing 60 kg (approximately 132 lbs):

- **ADI Calculation:** Acceptable Daily Intake × Average Person Body Weight
 - 15 mg/kg bw × 60 kg = 900 mg/day

Given that a typical can of diet soda contains about 46 mg of Acesulfame Potassium:

- **Maximum Daily Consumption:** 900 mg ÷ 46 mg/can ≈ 20 cans/day

This means a 60 kg individual would need to consume approximately **20 cans** of diet soda daily to reach the ADI.

Food Additive Specifications

Additionally, EFSA recommends updating the EU specifications for acesulfame K to include:

- The Chemical Abstracts Service (CAS) number 55589-62-3.
- A maximum limit of 0.1 mg/kg for 5-chloro-acesulfame, unless further genotoxicity data are provided.
- A maximum limit of 1 mg/kg for acetylacetamide.
- Lower limits for lead and mercury content.

No microbiological criteria were deemed necessary for acesulfame K.

Key Message

- ❖ The consistent ADI of 15 mg/kg body weight/day across major regulatory authorities underscores a global consensus on the safety of Acesulfame Potassium when consumed within established limits. This alignment provides assurance to consumers and professionals regarding the use of this non-nutritive sweetener in various food and beverage products.

³ <https://webprod.hc-sc.gc.ca/nhp/nd-bdipsn/ingredReq?id=1005>

⁴ <https://www.foodstandards.gov.au/consumer/additives/Sweeteners>

⁵ <https://www.fda.gov/food/food-additives-petitions/aspartame-and-other-sweeteners-food#:~:text=The%20ADI%20in%20milligrams%20per,15%20mg%2Fkg%20bw%2Fd>