

Guidance for Producers, Importers, Suppliers, Distributors and Retailers

Not all poppy seeds are suitable for food use. Serious poisoning events have occurred in Australia and other countries, resulting in hospitalisations and in some cases death.

Food grade poppy seeds are produced from the same plant species (*Papaver somniferum*) that is used to supply opium alkaloids to the pharmaceutical industry. Poppy seeds are available in different grades. It is important that producers, importers, suppliers, distributors and retailers of poppy seeds are aware of these grades:

1. Pharmaceutical or industrial grade
2. Food grade for further food manufacturing (e.g. baking), and
3. Food grade for direct-to-consumer sales.

Only food grade poppy seeds should enter the food supply chain. Food businesses must ensure that poppy seeds that are food grade for further food manufacturing are not packed for retail sale.

Opium alkaloids in poppy seeds

Opium alkaloids are a diverse group of naturally occurring substances found in the latex of opium poppies. The most commonly known opium alkaloids are morphine, codeine and thebaine.

There are very small amounts of opium alkaloids in the poppy seeds themselves, but they can be present in latex residues remaining on the outside of the seed, or in any chaff that contaminates the seed.

It is possible to produce food grade poppy seeds harvested from high-opium varieties if the seeds are processed in a way that sufficiently reduces the opium alkaloid content. It is critical that food suppliers and businesses are confident their processes for high-opium varieties result in safe and suitable product before they are used in food.

Poppy seeds and the Australia New Zealand Food Standards Code

Only the poppy seed of *Papaver somniferum* is permitted in food. The rest of the poppy plant, as well as any part including the seed of the oriental poppy (*Papaver bracteatum*), is listed in *Schedule 23 – Prohibited plants and fungi* of the Australia New Zealand Food Standards Code (the Code) and cannot be sold as food.

There is no prescribed maximum limit for opium alkaloids in the Code. However, food businesses are required under *Standard 3.2.2 – Food safety practices and general requirements* of the Code to take all practicable measures to process only safe and suitable food. Safe and suitable is defined in *Standard 3.1.1 – Interpretation and application* of the Code, where a food is deemed to be not safe if it is likely to cause physical harm to a person when it is prepared and consumed according to its reasonable intended use.

Australian state and territory food Acts also require all food for sale, including poppy seeds, to be safe and suitable.

Overseas regulations

There are no internationally agreed standards or guidelines for opium alkaloids in poppy seeds.

The European Union has imposed a maximum limit for opium alkaloids of 20 mg/kg in whole, ground or milled poppy seeds placed on the market for the final consumer; and 1.5 mg/kg in bakery products containing poppy seeds and/or derived products thereof. This limit refers to the sum of morphine and codeine only, where the codeine concentration is first multiplied by 0.2 to correct for its lower toxicity.

Hungary has established additional maximum limits for diverse opium alkaloids in poppy seeds, specifying a maximum limit for morphine of 30 mg/kg; noscapine of 20 mg/kg; the sum of morphine and noscapine of 40 mg/kg; thebaine of 20 mg/kg; and for codeine of 20 mg/kg.

How can I ensure my product is safe?

Removing contaminating plant matter, wet washing seeds and further food processing such as cooking or grinding are all measures to minimise the amount of opium alkaloids in poppy seeds.

Selling the incorrect grade of poppy seeds direct to consumers poses the greatest safety risk. These purchasers may use the seed for unconventional food use (e.g. eating uncooked seeds or brewed into poppy seed tea). Such uses may result in serious adverse health effects and can be fatal if the opium alkaloid levels in the seeds is high.

It is important businesses supplying poppy seeds into the food market are aware of the risk of opium alkaloids in these products and take every opportunity to confirm that:

1. any poppy seeds you have purchased from your suppliers are safe and suitable for their intended use
2. you are following your supplier recommendations for the intended consumer (e.g. for retail sale or for food manufacturing only)
3. when selling poppy seeds, your purchaser is aware of the intended use of the seed you are supplying
4. when further processing seeds, you understand the opioid alkaloid levels of your product and can confirm they are safe and suitable for any new use.

For further information on the food safety requirements and compliance in your local area, please contact your [state or territory food regulator](#)¹.

¹ <https://www.foodstandards.gov.au/about/foodenforcementcontacts/Pages/default.aspx>