

Risks associated with Cashews

Anacardic Acid

As previously mentioned in the item description, the most obvious and harmful risk associated with cashews is the anacardic acid that surrounds the nut in its raw form. If handled, the oil, which has a characteristic similar to that of poison ivy can cause an unpleasant irritation on the skin due to its corrosiveness. The roasting process is crucial for removing this substance and thus making them safe to be handled, sold and consumed.

Mould & Spoilage

Cashews can be highly susceptible to mould and spoilage if they are exposed to high moisture and humidity levels. Although native to tropical, humid climates, these nuts require a particular level of humidity and moisture exposure. Cashews transported in sacks, are at high risk to moisture penetration and therefore mould formation due to 'ship sweat'. Therefore, appropriate ventilation is required to combat excessive humidity during storage and transportation. Humidity levels of around 70% and moisture levels between 8.9 and 9.2% are deemed the maximum safe levels for cashews to grow. Above these levels, mould, discolouring and rancidity are highly likely. After processing, we utilise a PRS (Positive Release System) to determine the moisture value of the nuts before shipment and make sure they are within the parameters of 3-5%. Furthermore, this PRS provides us with exact percentage values of defects, damages and spoilage of the nuts.

Aflatoxins

All nuts, including cashews can be at risk of a chemical known as aflatoxin, produced by two types of mould, *aspergillus flavus* and *aspergillus parasiticus*. These moulds, which grow in soil, are largely found in areas with humid climates, climates that the cultivation of nuts is heavily prevalent. Luckily, the cashew nut is less exposed to the dangers of aflatoxins due to the protection provided by its shell during the growing process.

Governments provide regulations on acceptable levels of aflatoxins in all foods. In the USA, the USFDA (US Food and Drug Agency) permits a maximum level of 20ppb (parts per billion). The European Union is even stricter, permitting a maximum of 4ppb to allow foods to be suitable for human consumption.

Even though cashews are less susceptible to aflatoxins, improper post-harvest handling and storage conditions such as high moisture, temperature and insect-related damage can contribute to the fungus that can produce toxins such as

aflatoxin. Therefore, care in all aspects of cashew nut cultivation, handling, storage, and transportation is required to help in its prevention.

Infestation

In adherence to AFI (Association of Food Industry) standards, infestation of cashew nut kernels is strictly prohibited. Infestation is regarded as exhibiting evidence of insects or mites alive or dead, as well as signs of insect-related damage. The main insect threats associated with cashews are those from ants, grain weevils and meal moths. To combat the threat of infestations, correct hygiene practices during the processing stages are compulsory. Should infestations occur, the cashew containers will require freezing.

Foreign Matter

Can include stones, dirt, glass, metal, sticks, plastic and paper. These objects are most commonly picked up during the processing stages. To eliminate the risk of contamination by foreign matter, correct control procedures are applied. Correct hygiene standards and clean working conditions contribute to minimising contamination. Furthermore, our Positive Release System is in place to provide a thorough analysis of the cashew containers after processing to make sure they are under the maximum level of 0.01%.

Possible Defects

Defects include the superficial or intrinsic damage that adversely affect the appearance of the nut kernels. These include scorching, discolouration, blemishes, spots, shrivelling and immaturity, scrapes, adhering testa and speckles. These defects vary by grade.

Scorching

A discolouration due to over-heating during the roasting or drying process. Usually a light brown colour but can also possess shades of light grey, deep ivory and yellow.



Blemishes or Discolouration

Spots in aggregate in excess of 3mm from causes other than shelling or blanching.



Pitted Spots

Black brown or other coloured spots in excess of 1mm, caused by pre-harvest attacks on the kernel.



Shrivelling and Immaturity

Shrivelling - A complete withering of the kernel that distorts its natural shape

Immaturity - Kernels are underdeveloped and do not have the characteristic shape of a cashew kernel



Adhering Testa

Testa is the natural protective skin of the cashew. Kernels are scored as affected by adhering testa when a surface area greater than 2mm in aggregate is affected.



Superficial Damage and Scraping

Superficial Damage - Deep knife cuts on the surface of the kernel that change the characteristic shape of the nut.

Scraping - Damage of the outer surface of the kernel by knife scratches affecting an aggregate area of 5mm or more. Scrapes on the inside of the natural curve of the nut are not counted as scrapes.

