

21 September 2017

Dear Sir/ Madam,

Update on advice to Food Business Operators (FBO) on the sale of apricot kernels and bitter almonds

You will be aware that the Food Standards Scotland (FSS) has previously advised that raw apricot kernels should not be consumed. This is because they contain the naturally occurring substance amygdalin – a cyanogenic glycoside which results in the release of cyanide during digestion of the kernels in the human gut.

Cyanide is a poisonous chemical that can cause nausea, fever, headaches, insomnia, thirst, lethargy, nervousness, joint and muscle aches and pains, falling blood pressure, and in extreme cases can be fatal.

This consumption advice was based on a European Food Safety Authority (EFSA) Scientific Opinion¹ which looked at the risks to human health from consuming raw apricot kernels. EFSA concluded that an adult who eats less than half of a large kernel could exceed the safe level for cyanide. For toddlers, the amount would be about half of one small kernel. EFSA also stated that it was not possible to distinguish between the bitter and sweet varieties of apricot kernels in terms of cyanide levels present and therefore the risk to human health.

Following discussions with the European Commission and other Member States, legislation has now been agreed to control the presence of cyanide in apricot kernels. A maximum level of 20 mg/kg has been established for hydrocyanic acid in raw, unprocessed apricot kernels both bitter and sweet varieties, including milled, cracked or chopped raw products set out in Commission Regulation EU 2017/1237² amending section 8 of the Annex to Regulation (EC) No 1881/2006.

Raw, unprocessed apricot kernels (both bitter and sweet varieties) should not be sold for human consumption unless cyanide levels are compliant with the legislation. Article 2 of 2017/1237 states that it is the Food Business Operator's (FBO's)

¹ Acute health risks related to the presence of cyanogenic glycosides in raw apricot kernels and products derived from raw apricot kernels, EFSA Journal 2016; 14(4): 4424 [47pp]

² <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1237&from=HR>

responsibility to demonstrate that cyanide levels in all unprocessed whole, ground, milled, cracked, chopped apricot kernels placed on the market for the final consumer are compliant with this maximum level. Therefore, the FBO should be able to provide evidence that the levels of cyanide are below 20 mg/kg in the product that is sold to the consumer. Since it is known that the levels of cyanide can vary in apricot kernels, it is important that the samples for testing are representative of the entire batch. Most labs are aware of this and there is EU legislation that sets out how sampling is carried out to ensure it is representative of the whole batch³. Evidence that the apricot kernels are from an established source where cyanide levels in the kernel are consistently below 20 mg/kg, is also acceptable.

Processed apricot kernels used as flavourings or ingredients in some foods e.g. persipan will have undergone heat treatment which reduces cyanide levels. These are subject to cyanide maximum levels, set out in Regulation (EC) No 1334/2008 on flavourings and certain food ingredients with flavouring properties for use in and on food.

The maximum limit of 20 mg/kg applies to raw, unprocessed apricot kernels including the milled, cracked or chopped forms placed on the market for the final consumer. If there are consignments of apricot kernel meant for further processing, e.g. persipan manufacture, the importer/food business operator (FBO) should provide clear evidence of intended use either on the label on each individual bag/box/etc. or in the original accompanying documents. In the absence of these evidence of compliance with the ML of 20 mg/kg should be provided.

Bitter almonds which are also known to have high levels of cyanide are currently not included within the scope of the 20 mg/kg cyanide maximum level as it is understood that they are normally used only after further processing or home cooking and would not be eaten raw. However if it is evident that raw kernels are being sold for direct human consumption and there is an indication of risk to human health, enforcement action can be taken in accordance with general food law.

Yours faithfully,

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³ Commission Regulation (EU) No 401/2006 (as amended) laying down the methods of sampling and analysis for the official control of the levels of mycotoxins in foodstuffs.