

**ADVISORY COMMITTEE FOR NOVEL FOODS AND PROCESSES**

**SYRUP FROM *SORGHUM BICOLOR* – TRADITIONAL FOOD NOTIFICATION NF 2018/0267**

**ISSUE**

1. A notification has been received under the traditional foods authorisation process for the syrup of *Sorghum bicolor* under the Novel Foods Regulation (EU) No 2015/2283.
2. The Committee is asked whether there are safety concerns with the proposed use of this traditional food in the EU market. The information from the Committee will provide the basis for any safety objections raised by the UK at EU level.

**Background**

3. On 30 April the European Commission forwarded the notification from Sorghum Zrt for Sorghum syrup, for the syrup of *Sorghum bicolor* as a traditional food in a third country. The syrup is the juice extracted from crushed sorghum stalks, that is further processed as known to be consumed in the USA. The applicant intends to sell sorghum syrup as a natural sweetener wherever honey would be used.
4. Member States have four months until 30 August to submit reasoned objections to the notification. If authorised, the authorisation will be open to any company subject to the specification and conditions of use detailed in the dossier.
5. The notification dossier is attached as **Annex A** with its associated appendices. **Annex A** contains protected information.

**This application**

*Composition and specification*

6. The applicant is seeking to market the syrup of *Sorghum bicolor* for sweetening and flavouring drinks and food. Sorghum syrup is also known as sweet sorghum and sorghum molasses. Sorghum syrup is described as goldish, yellowish-brown translucent with a honey like viscosity and a caramel scent.

7. The applicant notes that the major constituents of the syrup are carbohydrates, mostly soluble glucose, fructose and sucrose with varying levels dependent on cultivar, maturity, environment and processing conditions. The applicant reports that the syrup also contains soluble and insoluble starch but notes that juice clarification should remove a large amount.
8. The proximate analysis suggests the composition to be:

<b>Nutrient</b>	<b>Reported values per 100g</b>
Energy	290 kcal 1220 kJ
Carbohydrate	70g
Proteins	0.1g
Salt	0.241g

The applicant suggests the carbohydrate profile is sucrose cca. 40m/m%, fructose cca. 15m/m%, glucose cca. 15m/m%. Sorghum syrup is reported to not contain any fat or dietary fibre.

#### *Nutritional aspects*

9. The applicant has provided basic information on the nutritional content of sorghum syrup. A tablespoon serving is noted to contain 61 calories.
10. A summary of the composition supplied by the applicant is in the table below. The applicant also notes that sorghum syrup contains small amounts of thiamine, pantothenic acid, copper, selenium and riboflavin.

<b>Nutrient</b>	<b>mg/kg</b>
Calcium	330
Iron	4
Potassium	1770
Magnesium	190
Phosphorus	110
Copper	0.9
Zinc	7.7

### *Production process*

11. Sorghum is a grass native to Africa. It is naturalized in tropical regions of Asia, India, Australia, and the Americas and cultivated throughout tropic, sub tropic and warm temperate regions.
12. Information is provided on the production processes used in the USA and Hungary. Process consists of crushing sorghum stalks, milling and extraction of the juice. The primary juice is then purified and concentrated. Temperature of the extraction liquid will be 80°C. The pressed juice will be boiled, clarified and filtered. Filtered material to be evaporated to 50° Brix. Following clarification, the syrup will be evaporated to 75° Brix and stored in tanks before filling into bottles/containers.
13. The applicant notes that no additional colour, flavour or preservatives are added.

### *Evidence of traditional use*

14. The applicant explains that sorghum syrup has been consumed as a sweetener in the Southern states of the USA, noting that it was particularly popular during the 1800s and early 1900s. The applicant reports that sorghum syrup is now commercially produced in 26 states of the USA with 500-700 producers across ca. 12,000 ha. One of the top producers was reported to produce 10,000 gallons (37854.12 litres) a year. Information on consumption per capita is not provided.
15. The applicant also reports that sorghum syrup is produced in several other countries, including the UK, however the evidence provided for the UK relates to production in the USA reported in a British magazine. No information on the scale of production outside the USA or level of consumption is provided.

### *Safety concerns identified by the applicant*

16. The applicant notes that the product is free of pesticides, contamination and allergens. As sorghum syrup has a high sugar content, the applicant notes that it can cause the same issues as sugar i.e. tooth decay, diabetes and obesity. It is indicated that WHO recommendations of 50g of refined sugar would apply to sorghum syrup.
17. The microbiological specification is indicated to be as below.

Moulds (Quantity/g)	<10
Salmonella	0/25g
E.coli (MPN/g)	<0.3

18. The applicant notes that the literature has described sorghum syrup as 'extremely vulnerable to microbial spoilage during storage because of its high water activity and rich sugar medium.' However, the scientific paper referred to was describing sorghum juice rather than syrup. It is explained that the high-temperature extraction helps with preventing spontaneous fermentation. The applicant notes that sorghum syrup will be stored in plastic bottle or glass jars in a dry and clean place at room temperature.

19. The applicant does not make mention of a literature review to assess safety although some papers on microbial populations in sorghum syrup were provided as annexes to the dossier.

#### **COMMITTEE ACTION REQUIRED**

- Members are asked whether there are safety concerns that need to be managed with this traditional food from third countries.
- The Committee's advice will form the basis for the UK's formal response to the Commission and whether reasoned safety objections are submitted.

**Secretariat  
June 2018**

#### **Annexes attached:**

**Annex A** Notification dossier for *Sorghum syrup (Sorghum bicolor)* as a traditional food from third countries.