

Consultation request to determine the status of brewer's spent grain fiber and brewer's spent grain protein, pursuant to Article 4(2) of Regulation (EU) 2015/2283 of the European Parliament and of the Council of 25 November 2015 on novel foods

Recipient Member State: The Netherlands

Assessment by the Novel Food Unit of the Medicines Evaluation Board Agency, 9 January 2023

Name of the foods: brewer's spent grain fiber (BSG-F) and brewer's spent grain protein (BSG-P)

Description of the foods:

The foods in question are two fractions from brewer's spent grain (BSG), a residue of malt from the beer brewing process. By adding water to the spent grains, a suspension of particles is obtained, which are mechanically separated on a screen by means of size exclusion (sieving). This separation is the essential step in the formation of the two fractions, with enhanced levels of either protein or fiber. The process is based on a technique described in a publication by Schwencke, 2006. The resulting preparations are a powder with approximately 50% protein (BSG-P) and a powder with approximately 70% fiber (BSG-F), according to the dossier. The applicant proposes to use these preparations in 'biscuits' and 'whole grain bread'. The Novel Food Unit notes that in 1981 a patent was submitted for the fractionation of spent grains into a protein fraction and a fiber fraction, also for use as food ingredient, by a process based on the same principle as in the current consultation request (European Patent Office, 1987).

Status: BSG-P and BSG-F are both not novel.

Novel food category: Not applicable

Reasons statement:

The starting material, brewer's spent grain, is a residual product from the beer brewing process, and has been consumed within in European Union before 15 May 1997. It is therefore not a novel food, as stated in the Novel Food Catalogue. In the dossier, the applicant reasons that BSG-P and BSG-F are obtained by a relatively straightforward separation technique during which its constituents do not undergo chemical changes. Also, the applicant referred to several products that are available on the market in the European Union, and that contain food ingredients comparable to BSG-P and BSG-F.

The two fractions are produced by a mechanical process that utilises water and a screen as part of the process. The resulting products are dried into a powder. Information on the composition of both products and the starting material BSG was provided by the applicant. When BSG-P is produced from BSG, the protein content increased about twofold while there are no significant differences in the amino acids profile. The remaining BSG-F contains about half the amount of protein and about 50 percent more fiber than BSG. There are no indications that components undergo chemical changes during the production process.

References:

Schwencke KV, 2006. Sustainable, cost-effective, and feasible solutions for the treatment of brewers' spent grains. Technical quarterly - Master Brewers Association of the Americas. 2006;43(3):199-202.

European Patent Office, 1987. Verfahren zur Gewinnung ballaststoffreicher und proteinreicher Fraktionen aus Biertreber. EP0050330B1 – Nr. of Application 81108410.22.

(<https://patents.google.com/patent/EP0050330B1/en17>)