Meeting

Barley Rice Protein

Committee paper for discussion

Advisory Committee for Novel Foods and Processes.
Barley Rice Protein – Novel Food Dossier – RP19

Issue

The Committee reviewed this application for the first time at the April 2021 meeting, and again in September. Further information on which to base the ACNFP's assessment was sought. Members are invited to consider the response from the applicant and whether it addresses the requests for information satisfactorily or if further information is required.

Background

1. On the 9 January 2021, the FSA received a dossier from Evergrain for authorisation of barley rice protein, a mixture of protein from barley at levels of 0-100% and rice at levels of 0-60%. The applicant intends to market the product within the food categories: bakery products, breakfast cereals, spreadable fats and dressings, grain products and pastas, snack foods, jam, marmalade and other fruit spreads, candy/confectionery, dairy and dairy imitates, dessert sauces and syrups, meat imitates, soups and soup mixes, savoury sauces, legume-based spreads, nutbased spreads, energy drinks, foods and beverages intended for sportsmen and meal replacements for weight control.

2. The Committee reviewed this application at the 147th ACFNP meeting of April 2021, and at the 149th ACNFP meeting of September 2021. The Committee identified several areas where additional information was required from the

applicant to inform the safety evaluation of their application. Information was requested on the:

- Identity and Composition
- Production Process
- Proposed Use
- Nutritional Information
- Allergenicity

3. The FSA’s request for further information and the applicant’s response are included as Annexes A and B (confidential), respectively.

The applicant’s response

Identity/Composition

4. The Committee sought clarification on how the proportion of starting materials are managed and what influences the percentage of starting material used. In their response the applicant provided details of the ranges of ratios of starting materials used and how the specification of the final product is affected (Figure 1 of the response) in particular in relation to amino acid profile.

5. The Committee sought further information on the particle size distribution of the product following hydrolysation and how a consistent product is achieved. The applicant responded by providing molecular weight profiles of 3 production batches of the novel food as analysed by high-performance size exclusion chromatography (Figure 2). The molecular size distribution for the 3 batches have been overlayed to demonstrate consistency.

Production process

6. The applicant was requested to clarify the protease used in the hydrolysation step is inactivated in the final product. The applicant has responded by referring

to Figure 2, to show which parameters are consistent in this step. The applicant has provided details of the conditions of the process which result in inactivation of the enzyme. Table 2, has been provided to demonstrate no protease activity is detected in the final product after a certain timepoint.
Proposed use

Proposed use

7. The Committee requested information on the likely intake for proposed uses of the product, in order to evaluate the potential use of the product which may result in a nutritional disadvantage for consumers. The applicant has responded by conducting an example exposure assessment using the food consumption data from the United Kingdom (UK) National Diet and Nutrition Survey (NDNS) Rolling Programme, Years 7 to 9, 2014 to 2017 (NatCen Social Research/MRC Elsie Widdowson Laboratory, 20191). The assessment has been performed for two key food categories - ‘Dairy and dairy imitates’ and ‘Meat imitates’.

Nutritional information

8. The Committee sought clarification on whether strategies used to reduce anti nutritional factors were effective in reducing them to safe levels. The applicant has responded by providing details of steps during the production process where antinutrients would be sufficiently reduced. Table 7 has been provided to demonstrate the effectiveness of the process in managing the level of antinutrients in 3 production batches of Barley Rice Protein.

Allergenicity

9. Members had commented that the information on the consistency in the production process would also inform the allergenicity assessment of the product. The applicant states the majority of peptides present in the starting material are digested into short peptides of low molecular weight. It is therefore not expected that the Barley Rice Protein would contain any peptides of sufficient size that would pose an allergenic concern or potential for cross-reactivity.
Committee Action Required

- The Committee is asked whether the response from the applicant is sufficient to complete the risk assessment.
- If not, the Committee is asked to indicate what additional information would be required.

ACNFP Secretariat
December 2021