


**Call for submissions – Application A1229:
Carboxypeptidase from GM *Aspergillus
oryzae* as a processing aid**

**Submission by the New Zealand Food & Grocery
Council**

22 March 2023

NEW ZEALAND FOOD & GROCERY COUNCIL

1. The New Zealand Food & Grocery Council (**NZFGC**) welcomes the opportunity to comment on the *Call for submissions – Application A1229: Carboxypeptidase from GM Aspergillus oryzae as a processing aid*.
2. NZFGC represents the major manufacturers and suppliers of food, beverage and grocery products in New Zealand. This sector generates over \$40 billion in the New Zealand domestic retail food, beverage and grocery products market, and over \$34 billion in export revenue from exports to 195 countries – representing 65% of total good and services exports. Food and beverage manufacturing is the largest manufacturing sector in New Zealand, representing 45% of total manufacturing income. Our members directly or indirectly employ more than 493,000 people – one in five of the workforce.

THE APPLICATION

3. Novozymes has applied for an amendment to Schedule 18 of the *Australia New Zealand Food Standards Code (the Food Standards Code)* to allow the carboxypeptidase enzyme obtained from a genetically modified strain of *Aspergillus oryzae* (**A. oryzae**) for use in the manufacture and/or processing of proteins, yeast and flavourings; the manufacture of bakery products; and brewing. A processing aid performs a technological purpose during processing/manufacture but does not remain or appear in the final food.

COMMENTS

Assessment by FSANZ

4. **Food Technology assessment** – FSANZ assesses the identity and purity of all additives and processing aids intended for use in the food supply. In this case, the substance is carboxypeptidase. FSANZ verified its identity with the International Union of Biochemistry and Molecular Biology (**IUBMB**). IUBMB material is compiled at the University of London and makes recommendations on biochemical and organic nomenclature, symbols and terminology drawing on the expertise of global experts in the relevant field.
5. FSANZ also noted that there were relevant identity and purity specifications for the enzyme in two of the primary sources of specifications listed in Schedule 3, namely the JECFA Combined Compendium of Food Additive Specifications and the United States Pharmacopeial Convention Food chemicals codex.
6. FSANZ's conclusion was that the enzyme provided the consistency and production efficiency in manufacturing and processing of the target foods. It was therefore technologically justified in the form proposed for use in the manufacture and/or processing of proteins, yeast and flavourings; the manufacture of bakery products; and brewing.
7. **Safety Assessment** – FSANZ assesses any history of use of the processing aid, its characteristics (in this case, the characterisation of the genetic modification) and the overall safety of the processing aid.
8. *A. oryzae* has been used in food processing for the last century. It is not pathogenic to humans. The overall safety is focussed on any adverse health effects resulting from toxicity, anti-nutrient properties or allergenicity. The application describes a newly developed enzyme and as a result, it has not been assessed by any other authorities or external expert groups at this time. FSANZ is therefore the first regulatory authority to consider the application.

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9. FSANZ addressed health and safety concerns in its risk assessment noting that:
 - A microbiological assessment concluded that *A. oryzae* has a long history of safe use in food
 - The production strain, *A. oryzae*, is non-toxigenic and non-pathogenic and has been shown to be non-genotoxic
 - A toxicological assessment combined with a dietary exposure assessment concluded the enzyme is safe under the proposed conditions of use.
 - As noted above, *A. oryzae* is a commonly used production strain for enzymes which are already approved for use in the Food Standards Code (at least twenty two).
 10. FSANZ concluded there were no public health and safety concerns identified with carboxypeptidase enzyme obtained from GM *A. oryzae* and its proposed use as a processing aid.
 11. NZFGC notes that not only is this the first assessment of this particular processing aid by any global authority, but also, if approved, it will be the first carboxypeptidase enzyme to be approved for inclusion in the Food Standards Code.
 12. **NZFGC Conclusion** – On the basis of the foregoing, NZFGC supports the amendment to Schedule 18—9(3) of the Food Standards Code that would see carboxypeptidase enzyme obtained from GM *A. oryzae* approved for use as a processing aid.