

18 December 2018

Project Manager  
Food Standards Australia New Zealand  
PO Box 10559  
The Terrace  
Wellington 6143  
NEW ZEALAND

Email: [submissions@foodstandards.gov.au](mailto:submissions@foodstandards.gov.au)

Dear Sir/Madam

Attached are the comments that the New Zealand Food & Grocery Council wishes to present on ***Call for submissions: Application A1162 Triacylglycerol Lipase from Trichoderma reesei as a processing aid (enzyme)***.

Yours sincerely

Katherine Rich  
**Chief Executive**



**Call for submissions: Application A1162  
Triacylglycerol Lipase from *Trichoderma  
reesei* as a processing aid (enzyme)**

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

**18 December 2018**

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## NEW ZEALAND FOOD & GROCERY COUNCIL

1. The New Zealand Food & Grocery Council (“NZFGC”) welcomes the opportunity to comment on ***Call for submissions: Application A1162 Triacylglycerol Lipase from Trichoderma reesei as a processing aid (enzyme)***.
2. NZFGC represents the major manufacturers and suppliers of food, beverage and grocery products in New Zealand. This sector generates over \$34 billion in the New Zealand domestic retail food, beverage and grocery products market, and over \$31 billion in export revenue from exports to 195 countries – some 72% of total merchandise exports. Food and beverage manufacturing is the largest manufacturing sector in New Zealand, representing 44% of total manufacturing income. Our members directly or indirectly employ more than 400,000 people – one in five of the workforce.

### The Application

3. An application has been made by AB Enzymes GmbH of Germany to allow the use of triacylglycerol lipase from a genetically modified strain of *Trichoderma reesei* (*T. reesei*) as a processing aid mainly for baking and other cereal processes.
4. Lipase works to influence interactions between different constituents in dough such as gluten, starch and lipids but has no technological function in the final food. The conversion of triglycerides, with the help of lipase, in baking and cereals processing facilitates the handling of dough, pasta and noodles, improves their stability, strength, structure and behaviour, regulates batter viscosity in waffles and pancakes etc, reduces cracking in noodles and reduces oil uptake during frying. The production process for triacylglycerol lipase results in an enzyme solution that is free of the production organism and other insoluble substances. It is then dried and sold as a powdered preparation with wheat flour as a carrier under the commercial name of Veron® Hyperbake ST.

## COMMENTS

### Risk assessment

5. FSANZ confirmed the technological purpose of triacylglycerol lipase as set out by the applicant and as the benefits described above result. As a processing aid in baking and other cereal-based processes it was also found to have the benefit of an increased tolerance to mechanical shock during processing. Its technological purpose is therefore justified and effective.

### Safety assessment

6. *T. reesei* is non-pathogenic, the triacylglycerol lipase is non-genotoxic *in vitro* and has no observed adverse effect level in the toxicity study at the highest dose tested (11,000 times higher than the applicant’s estimate of an individual’s theoretical maximum daily intake based on the proposed uses). The production process of triacylglycerol lipase ensures *T. reesei* is absent in the final enzyme preparation. *T. reesei* has a history of safe use as the production organism for a number of enzyme processing aids allowed in the Australia New Zealand Food Standards Code.
7. While the residual enzyme is expected to be present in the final food product, it would be inactivated by heat-treatment or non-active.
8. FSANZ found that the enzyme has no relationship to known protein allergens and is unlikely to present any allergenicity concern. There is risk with using wheat as carrier for the final product which requires management for wheat allergic individuals.

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9. In light of the foregoing safety assessment, FSANZ considered it unnecessary to specify an acceptable daily intake precluding the need for a dietary exposure assessment. FSANZ concluded that overall, there were no safety concerns from the use of triacylglycerol lipase as produced and as a processing aid in baking and other cereal processing.

**Other benefits**

10. NZFGC considers that the availability of a processing aid with enhanced processing attributes than is currently available on the New Zealand market provides benefits for manufacturers in processing and for consumers in products with better qualities.

**Overseas responses**

11. Triacylglycerol lipase was approved by France in April 2017, approved as 'Generally Recognised as Safe' by the USA (GRAS #631) and remains under consideration for approval by EFSA since a dossier was submitted in 2015.

**Labelling**

12. While the use of the enzyme triacylglycerol lipase as prepared presents no concern to public health and safety and the denaturation removes the need for labelling as genetically modified, the enzyme as sold is presented in a powder that is over 90% wheat flour. If products made with the enzyme are not already wheat-based, then the wheat presence triggers a mandatory labelling requirement.

**NZFGC Conclusion**

13. NZFGC supports the availability of substances such as processing aids that enhance food processing and manufacture and that provide choice amongst other similar enzymatic processing aids on the market. The consumer benefits from the improved quality of products and the food supply is enriched as a result.
14. NZFGC therefore supports the draft variation proposed by FSANZ that would result in amendment of Schedule 18 of the Australia New Zealand Food Standards Code and permit triacylglycerol lipase sourced from *T. reesei* to be used in baking and other cereal-based manufacture.