



17 July 2019

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Dear Sir/Madam

Attached are the comments that the New Zealand Food & Grocery Council wishes to present on the *Call for Submissions – Application A1164: Pullulanase from Bacillus lichiniformis as a processing aid.*

Yours sincerely



**Call for submissions – Application A1164:
Pullulanase from *Bacillus lichiniformis* as
a processing aid**

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

17 July 2019

NEW ZEALAND FOOD & GROCERY COUNCIL

1. The New Zealand Food & Grocery Council (“NZFGC”) welcomes the opportunity to comment on the ***Call for submissions – Application A1164: Pullulanase from Bacillus licheniformis 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 \$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. Dupont Australia has applied in May 2018 to have the Australia New Zealand Food Standards Code (the Food Standards Code) amended to permit the use of the enzyme pullulanase from a genetically modified (GM) strain of *Bacillus licheniformis*. The food enzyme is typically used in brewing and starch processing.

OVERARCHING COMMENTS

4. NZFGC supports the approval of an amendment to Schedule 18 of the Australia New Zealand Food Standards Code (the Food Standards Code) to include the new source for the enzyme Pullulanase from the genetically modified strain of *B. licheniformis* as a processing aid.
5. The food processing aid that is subject to the Application A1164 Pullulanase from a genetically modified strain of *B. licheniformis* is approved for use in France, Denmark, the USA and Japan. The enzyme was evaluated by JECFA (the Joint FAO/WHO Expert Committee on Food Additives) in 2011. A number of other enzymes where *B. licheniformis* has been the source processing aids have been approved by FSANZ for inclusion in the Food Standards Code in the past.
6. FSANZ’s technological and risk assessments of the Pullulanase from *B. licheniformis* application did not identify any issues of concern.
7. NZFGC considers that Pullulanase from *B. licheniformis* will add choice to the manufacture of food products for the benefit of New Zealand consumers.

COMMENTS

8. Around ten enzymes derived from *B. licheniformis* are already approved in the Food Standards Code and of the six pullulanase enzymes approved, one other is derived from *B. licheniformis*. The enzyme and the derivation is therefore well known. The key feature of this application is the GM strain of *B. licheniformis*. However, that too is well known globally, the enzyme having been approved for use in France, Denmark, the USA and Japan. The enzyme was evaluated by JECFA (the Joint FAO/WHO Expert Committee on Food Additives) in 2011.
9. FSANZ assessed the Pullulanase sourced from a genetically modified strain of *B. licheniformis*, and concluded it presented no public health and safety issues on the basis of several considerations including that the production organism is not toxigenic, pathogenic or sporogenic, *B. licheniformis* has a history of safe use as the production

organism for a number of enzyme processing aids that are already permitted in the Food Standards Code, the enzyme preparation is not genotoxic *in vitro* and the enzyme causes no observable effects at the highest tested doses in a 13 week toxicity study in rats. There is no homology to known allergens or toxins and it is therefore unlikely to present concerns for allergenicity or toxicity.

10. Use of this enzyme in the brewing and starch processing industries is intended to improve production processes by facilitating the degradation of starch. In brewing, with the release of oligosaccharides and glucose, the amount of fermentable sugars is increased. In starch processing, the main intention of Pullulanase is to facilitate the production of glucose and maltose syrups from starch.
11. In terms of risk management, processing aids are exempt from declaration in the list of ingredients because they are generally not in the final form of the food. The enzyme production identifies that the enzyme may contain wheat or soy residues (2-5 parts per billion). Glucose syrups made using the enzyme, if they have been subject to a refining process to remove gluten protein to the lowest possible level, are exempt from labelling. Beer is also exempt from declaring wheat or other cereals gluten. Products containing soy protein are not exempt from the declaration of allergens. FSANZ therefore concluded that the declaration of wheat or soy proteins would be required 'where appropriate'.
12. NZFGC is supportive of industry efforts to improve food processing and manufacturing and in light of the foregoing, NZFGC supports the application. NZFGC therefore also supports the inclusion in the Food Standards Code of an entry in Schedule 18 for Pullulanase sourced from *B. licheniformis* containing the gene for pullulanase isolated from *B. deramificans* for use in brewing and starch processing.