

Comments from the Victorian Department of Health and the Victorian Department of Jobs, Precincts and Regions.

Due date of submission – 18 January 2022

The Victorian Departments of Health and Jobs, Precincts and Regions (the departments) welcome the opportunity to respond to this application to amend the Australia New Zealand Food Standards Code (the Code).

Application A1231 - *Maltogenic alpha-amylase enzyme from GM Escherichia coli as a processing aid (enzyme)* seeks to permit the use of the enzyme maltogenic alpha-amylase derived from a genetically modified (GM) strain of *E. coli*.

From the Food Standards Australia New Zealand (FSANZ) Assessment report it is understood that:

- Maltogenic alpha-amylase from *E. coli* (the enzyme) is proposed to be used in brewing, manufacture of bakery products, and starch processing. The enzyme would not perform a function in these products, and therefore meets the requirements of a processing aid.
- The enzyme is derived from a genetically modified strain of *E. coli* (*E. coli* BLASC) containing the maltogenic alpha-amylase gene from *Geobacillus stearothermophilus*, which has a history of safe use for the production of food enzymes.
- The safety of *E. coli* BLASC has been assessed by FSANZ who found that the organism was neither pathogenic nor toxigenic.
- The enzyme has been assessed for safety by the European Food Safety Authority (EFSA), that concluded that the enzyme 'did not raise safety concerns under the intended condition of use¹'.
- Products manufactured using the enzyme maltogenic alpha-amylase derived from GM *E. coli* that list it as an ingredient, or contain novel protein or DNA, will be subject to the GM labelling requirements under the Code.

The departments note that the EFSA analysis identified at least one potential allergenic compound, similar to an alpha-amylase of *Aspergillus oryzae*, through comparison of the amino acid sequences of the applicant's enzyme to that of known allergens as is accepted EFSA practice. The *A. oryzae* amylase is a known respiratory allergen in an occupational setting that has no reported history of presenting as a food allergen. The departments accept that the risk of food allergic effects to consumers associated with this enzyme were considered low by both EFSA and FSANZ and will be further reduced through destruction of the enzyme through heat in baked or cooked products.

On the basis of the information above and FSANZ's conclusion that there are low public health and safety issues associated with the use of maltogenic alpha-amylase from the GM *E. coli* as a processing aid, the departments support the progression of Application A1231.

¹ EFSA CEP Panel (EFSA Panel on Food Contact Materials, Enzymes and Processing Aids), V. Silano et al. 2019. Scientific Opinion on the safety evaluation of the food enzyme maltogenic amylase from genetically modified *Escherichia coli* (strain BLASC). EFSA Journal 2019;17(7):5769, 16 pp. <https://doi.org/10.2903/j.efsa.2019.5769>