23 July 2021

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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 A1222: Steviol glycosides from* Yarrowia lipolytica*.*

Yours sincerely

Katherine Rich
Chief Executive

Call for submissions – Application A1222: Steviol glycosides from *Yarrowia lipolytica*

Submission by the New Zealand Food & Grocery Council

23 July 2021

NEW ZEALAND FOOD & GROCERY COUNCIL

1. The New Zealand Food & Grocery Council ("NZFGC") welcomes the opportunity to comment on the *Call for submissions – Application A1222: Steviol glycosides from* Yarrowia lipolytica*.*

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.

APPLICATION

3. The application is made jointly by Cargill and DSM in a joint partnership arrangement in the Netherlands. The joint partnership manufactures fermentation-derived sweeteners used in food, beverage, flavours, and fragrances applications to retailers, foodservice providers, and food, beverage, flavour, and fragrances manufacturers throughout the globe.

COMMENTS

4. The purified steviol glycoside preparation, rebaudioside MD, is produced by fermentation of simple sugars using a genetically modified *Yarrowia lipolytica (Y. lipolytica*, expressing steviol glycoside biosynthesis pathway genes.

5. The safety and risk assessment by FSANZ of this form and method of production of steviol glycoside indicates:

   - alignment with international purity specifications
   - meeting the purity parameters of specifications for steviol glycosides produced by fermentation listed in the *Australia New Zealand Food Standards Code* (the Food Standards Code), Schedule 3—39
   - no concerns with the host organism *Y. lipolytica* or the novel proteins expressed by the introduced genes for the biosynthesis of rebaudioside MD
   - the host *Y. lipolytica* production strain is not pathogenic or toxigenic
   - no allergy risk issues
   - similar digestion and metabolic fates to other forms of steviol glycosides when ingested
   - host organism, residual DNA or residual protein were not detectable in the final rebaudioside MD preparation.

6. Other competent and expert agencies (e.g. JECFA, EFSA, USFDA) overseas have agreed this form and method of production of steviol glycoside can be used safely in foods as proposed by the applicant.

7. NZFGC supports the FSANZ safety assessment which has not identified any health or safety concerns associated with the steviol glycosides as described in the application.

8. NZFGC also agrees that the Acceptable Daily Intake (ADI) of 0 – 4 mg/kg body weight expressed as steviol does not need changing as a result of rebaudioside MD preparation produced using genetically modified Y. *lipolytica*. The ADI is appropriate as it is chemically identical to the minor steviol glycosides extracted traditionally from the leaves of *Stevia*

rebaudiana Bertoni and follows the same metabolic pathway in humans, as reported in the FSANZ assessment.

9. NZFGC notes that while genetic modification techniques were used to prepare this steviol glycoside, no safety issues associated with these techniques (either on the proteins or DNA involved) were identified.

10. We also note that none of the host organism, residual DNA or residual protein were detectable in the final rebaudioside MD preparation. However, under the Food Standards Code, a requirement to label it as 'genetically modified' applies if novel DNA or protein is present in the final food, otherwise exemption from labelling applies.

11. Finally we note that the Food Standards Code will require declaration of rebaudioside MD preparation as a food additive in the statement of ingredients on the label of foods using the name 'steviol glycosides' or the International Numbering System (INS) code number 960.