

**3 November 2023**  
**268-23**

Approval report – Application A1250

## Pullulanase from GM *Bacillus subtilis* (gene donor: *Bacillus deramificans*) as a processing aid

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Food Standards Australia New Zealand (FSANZ) has assessed an application made by Novozymes Australia Pty Ltd to amend the Australia New Zealand Food Standards Code to permit pullulanase sourced from a genetically modified strain of *Bacillus subtilis* containing the pullulanase gene from *Bacillus deramificans* as a processing aid for use in starch processing.

On 15 June 2023, FSANZ sought submissions on a draft variation and published an associated report. FSANZ received one submission.

FSANZ approved the draft variation on 25 October 2023. The Food Ministers' Meeting<sup>1</sup> was notified of FSANZ's decision on 3 November 2023.

This Report is provided pursuant to paragraph 33(1)(b) of the *Food Standards Australia New Zealand Act 1991* (the FSANZ Act).

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<sup>1</sup> Formerly referred to as the Australia and New Zealand Ministerial Forum on Food Regulation

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## Supporting document

The [following document](#) which informed the assessment of this application is available on the FSANZ website:

SD1 Risk and technical assessment report (at Approval)

## Executive summary

Novozymes Australia Pty Ltd submitted an application to Food Standards Australia New Zealand (FSANZ) to amend the Australia New Zealand Food Standards Code (the Code) to permit the use of the enzyme pullulanase (EC 3.2.1.41) as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates. The pullulanase is sourced from a genetically modified (GM) strain of *Bacillus subtilis* containing the pullulanase gene from *Bacillus deramificans*.

FSANZ's risk assessment concluded that the pullulanase was technologically justified when performing its purpose in the quantity and form proposed during the production of food and not in the food for sale, therefore functioning as a processing aid for the purposes of the Code. The enzyme meets international purity specifications.

*B. subtilis* has a long history of safe use as a production microorganism of enzyme processing aids, including several that are already permitted in the Code. The production organism is neither pathogenic nor toxigenic.

No public health and safety concerns were identified in the assessment of the pullulanase enzyme under the proposed use conditions. Analysis of the GM production strain confirmed the presence and stability of the inserted DNA. Bioinformatics analysis found no significant homology of the pullulanase enzyme with any known toxins or food allergens.

Based on the reviewed data it is concluded that in the absence of any identifiable hazard, an acceptable daily intake 'not specified' is appropriate.

Following assessment and the preparation of a draft variation to the Code, FSANZ called for submissions regarding the draft variation from 15 June 2023 to 27 July 2023. FSANZ received one submission, which supported the draft variation and did not raise any issues.

FSANZ has therefore approved a variation to the Code which adds the enzyme pullulanase (EC 4.2.1.41) sourced from *B. subtilis*, containing the pullulanase gene from *B. deramificans*, in the table to subsection S18—9(3) as a permitted processing aid. The specified technological purpose of this enzyme is for use in starch processing for production of glucose syrups and other starch hydrolysates. The maximum permitted level or amount of the enzyme that may be present in the food would have to be consistent with Good Manufacturing Practice.

# 1 Introduction

## 1.1 The applicant

The applicant is Novozymes Australia Pty Ltd (Novozymes), part of the international parent company Novozymes A/S based in Denmark. It is a biotechnology company that manufactures and supplies enzymes, including for the food industry.

## 1.2 The application

The purpose of the application was to amend the Australia New Zealand Food Standards Code (the Code) to permit the use of the enzyme pullulanase sourced from a genetically modified (GM) strain of *Bacillus subtilis* containing the pullulanase gene from *Bacillus deramificans* as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates.

## 1.3 The current Standard

Australian and New Zealand food laws require food for sale to comply with relevant requirements in the Code. The requirements relevant to this application are summarised below.

### 1.3.1 Permitted use

Enzymes used to process and manufacture food are considered processing aids. Although they may be present in the final food, they no longer provide a technological purpose in the final food.

Paragraph 1.1.1—10(6)(c) of the Code provides that food for sale cannot contain, as an ingredient or component, a substance used as a processing aid unless that substance's use as a processing aid is expressly permitted by the Code. Section 1.1.2—13 provides that a substance used as a processing aid in relation to a food is a substance used during the course of processing that meets all of the following conditions:

- it is used to perform a technological purpose during the course of processing
- it does not perform a technological purpose in the food for sale, and
- it is a substance listed in Schedule 18 or identified in section S16—2 as an additive permitted at Good Manufacturing Practice (GMP).

Standard 1.3.3 and Schedule 18 of the Code list permitted processing aids. Enzymes of microbial origin permitted to be used as processing aids are listed in the table to subsection S18—4(5) or in the table to subsection S18—9(3) of Schedule 18, depending on whether a technological purpose has been specified. Enzymes of microbial origin listed in the table to subsection S18—4(5) are permitted for use as a processing aid to perform any technological purpose if the enzyme is derived from the corresponding source specified in the table. The table to subsection S18—9(3) lists those substances, including enzymes derived from particular sources, that are permitted to be used as processing aids for specific technological purposes in relation to:

- if a food is specified—that food; or
- if no food is specified—any food.

Additionally, paragraph 1.3.3—11(c) specifies that the substance may only be used as a processing aid if it is not present in the food at greater than the maximum permitted level for that substance indicated in the table to section S18—9.

Paragraph 1.1.1—10(6)(g) requires that the presence as an ingredient or component in a food for sale of a food produced using gene technology must be expressly permitted by the Code. Paragraph 1.5.2—3(b) provides that permission in the Code for use as a processing aid also constitutes the permission required by paragraph 1.1.1—10(6)(g).

Six sources of pullulanase are approved for use in the Code, within the table to subsection S18—4(5), as copied below. They are permitted to be used as processing aids in the production of any food.

<b>Enzyme</b>	<b>Source</b>
Pullulanase (EC 3.2.1.41)	<i>Bacillus acidopullulyticus</i> <i>Bacillus amyloliquefaciens</i> <i>Bacillus licheniformis</i> <i>Bacillus subtilis</i> <i>Bacillus subtilis</i> , containing the gene for pullulanase isolated from <i>Bacillus acidopullulyticus</i> <i>Klebsiella pneumoniae</i>

There is also an additional permission for pullulanase listed within the table to subsection S18—9(3), as copied below. This pullulanase enzyme is permitted as a processing aid for use in brewing and starch processing. The permission was gazetted on 5 December 2019 as an outcome of FSANZ’s assessment of application A1164.

<b>Substance</b>	<b>Technological purpose and food</b>	<b>Maximum permitted level (mg/kg)</b>
<b>Pullulanase (EC 3.2.1.41) sourced from <i>Bacillus licheniformis</i> containing the pullulanase gene from <i>Bacillus deramificans</i>.</b>	For use in brewing and in starch processing.	GMP

### 1.3.2 Identity and purity requirements

Paragraph 1.1.1—15(1)(b) of the Code requires substances used as processing aids to comply with any relevant identity and purity specifications listed in Schedule 3 of the Code.

Subsection S3—2(1) of Schedule 3 incorporates by reference the specifications listed in the Joint FAO/WHO Expert Committee on Food Additives (JECFA) Combined Compendium of Food Additive Specifications (FAO JECFA Monographs 26 (2021)), which explicitly contains the specification for enzyme preparations in the earlier FAO/WHO (2006). It also references the United States Pharmacopeial Convention Food Chemicals Codex, 13<sup>th</sup> edition (FCC 2022). Both include specifications for enzyme preparations used in food processing.

### 1.3.3 Labelling requirements

Subsection 1.1.1—10(8) provides that food for sale must comply with all relevant labelling requirements in the Code.

Paragraphs 1.2.4—3(2)(d) and (e) exempt processing aids from the requirement to be declared in the statement of ingredients, unless other requirements apply.

Section 1.5.2—4 of the Code requires a food for sale that consists of a *genetically modified food*<sup>2</sup> (GM food) or has a GM food as an ingredient to be labelled as 'genetically modified', unless an exemption applies. The statement 'genetically modified' must be made in conjunction with the name of the GM food. If the GM food is used as a processing aid, this statement may be included in the statement of ingredients. In these circumstances, the requirements imposed by section 1.5.2—4 apply to foods for retail sale and to foods sold to a caterer in accordance with Standard 1.2.1.

## 1.4 International standards

In developing food regulatory measures, Food Standards Australia New Zealand (FSANZ) must have regard to the promotion of consistency between domestic and international food standards. In terms of food safety, the relevant international standard setting body is the Codex Alimentarius Commission (Codex). There is no Codex Alimentarius 'general standard' for enzymes, however as noted above there are internationally recognised specifications for enzyme preparations established by JECFA and Food Chemicals Codex.

In addition, there is a Codex guideline, *Guidelines on Substances used as Processing Aids* (CAC/GL 75-2010), which sets out general principles for the safe use of substances used as processing aids, including that substances used as processing aids shall be used under conditions of GMP.

## 1.5 Reasons for accepting application

The application was accepted for assessment because:

- it complied with the procedural requirements under subsection 22(2) of the *Australia New Zealand Food Standards Act* (FSANZ Act)
- it related to a matter that warranted the variation of a food regulatory measure.

## 1.6 Procedure for assessment

The application was assessed under the General Procedure.

## 1.7 Decision

The draft variation as proposed following assessment was approved with the following typographical amendment: amend the name of the instrument in clause 1 of the approved draft variation by italicising the bracket immediately after 'Bacillus deramificans'. The variation takes effect on gazettal. The approved draft variation is at Attachment A.

The related explanatory statement is at Attachment B. An explanatory statement is required to accompany an instrument if it is lodged on the Federal Register of Legislation.

# 2 Summary of the findings

## 2.1 Summary of issues raised in submissions

FSANZ called for submissions on the draft variation to the Code from 15 June 2023 to 27

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<sup>2</sup> Section 1.5.2—4(5) defines *genetically modified food* to mean a 'food produced using gene technology that (a) contains novel DNA or novel protein; or (b) is listed in Section S26—3 as subject to the condition that its labelling must comply with this section' (*that being section 1.5.2—4*).

July 2023. One submission was received during the consultation process. It was supportive and did not raise any issues with the application.

## 2.2 Risk assessment

FSANZ conducted a risk assessment related to this application which is provided as SD1. The conclusion of this assessment is provided below.

Pullulanase performs its technological purpose during the production of food and is not performing the technological purpose in the food for sale. On that basis, the enzyme would function as a processing aid for the purposes of the Code. There are identity and purity specifications in the Code relevant to the enzyme. Evidence has been provided and assessed indicating that the enzyme preparation can comply with these specifications.

*B. subtilis* has a long history of safe use as a production microorganism of enzyme processing aids, including several that are already permitted in the Code. The production organism is neither pathogenic nor toxigenic.

No public health and safety concerns were identified in the assessment of the pullulanase enzyme under the proposed use conditions. Analysis of the GM production strain confirmed the presence and stability of the inserted DNA.

Bioinformatics analysis found no significant homology of the pullulanase enzyme with any known toxins or food allergens. Pullulanase was not genotoxic *in vitro*, and no adverse effects were found in a subchronic oral toxicity study in rats. The no observed adverse effect level (NOAEL) in this study was 1285 mg total organic solids (TOS)/kg bw/day, the highest dose tested.

The theoretical maximum daily intake (TMDI) of the TOS from the pullulanase enzyme preparation was calculated to be 0.62 mg TOS/kg bw. A comparison of the NOAEL and the TMDI resulted in a Margin of Exposure (MOE) of approximately 2100.

Based on the reviewed data it was concluded that in the absence of any identifiable hazard, an acceptable daily intake 'not specified' was appropriate.

## 2.3 Risk management

The risk management options available to FSANZ after assessment were to either:

- reject the application, or
- prepare a draft variation of the Code.

The conclusions from the risk and technical assessment were that the proposed use of the enzyme is technologically justified and there were no safety concerns associated with its proposed use.

FSANZ therefore considered it appropriate to prepare a draft variation to the Code to permit the proposed use of the enzyme pullulanase produced using a GM strain of *B. subtilis*, containing the pullulanase gene from *B. deramificans*, as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates. This permission would be subject to the condition that the maximum permitted level or amount of enzyme that

may be present in the food must be an amount consistent with GMP. FSANZ called for submissions on the draft variation.

Following the call for submissions and having regard to the submission received, for the reasons set out in this report, FSANZ considers it appropriate to approve the draft variation proposed following assessment with a typographical amendment (see section 1.7 above and Attachment A).

Other risk management considerations for this application were related to the enzyme and source microorganism nomenclature, specifications and labelling. These are discussed below.

### **2.3.1 Regulatory approval for enzymes**

As stated above, FSANZ has approved a draft variation to permit the use of the enzyme as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates. The express permission for the enzyme to be used as a processing aid also provides the permission for its potential presence in the food for sale as a food produced using gene technology. The enzyme is a food produced using gene technology for Code purposes as it is derived from ‘an organism which has been modified by gene technology’ (see subsection 1.1.2—2(3) of the Code)<sup>3</sup>.

### **2.3.2 Enzyme nomenclature**

FSANZ noted that the International Union of Biochemistry and Molecular Biology (IUBMB), the internationally recognised authority for enzyme nomenclature, uses the ‘accepted’ name ‘pullulanase’ for the enzyme with an EC number of EC 3.2.1.41 (IUBMB 2023).

There are 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 (refer to Section 1.3.2 above).

### **2.3.3 Labelling**

Relevant labelling provisions in the Code will apply to foods for sale that are manufactured using this processing aid. See Section 1.3.3 above.

### **2.3.4 Risk management conclusion**

The risk management conclusion was to permit the enzyme pullulanase (EC 4.2.1.41) sourced from *B. subtilis*, containing the pullulanase gene from *B. deramificans*, for use as a food processing aid. The enzyme will be listed in the table to subsection S18—9(3) of the Code, which includes enzymes permitted for a specific technological purpose. The technological purpose of this enzyme is as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates. The maximum permitted level or amount of the enzyme that may be present in the food must be consistent with GMP. The express permission for the enzyme to be used as a processing aid in Schedule 18 of the Code provides permission for the enzyme’s potential presence in the food for sale as a food produced using gene technology.

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<sup>3</sup> Food produced using gene technology’ is defined in subsection 1.1.2—2(3) as meaning ‘a food which has been derived or developed from an organism which has been modified by gene technology’.



## **2.4 Risk communication**

### **2.4.1 Consultation**

Consultation is a key part of FSANZ's standards development process. FSANZ developed and applied a standard communication strategy to this application. All calls for submissions are notified via the Food Standards Notification Circular, media release, FSANZ's social media channels and Food Standards News.

The process by which FSANZ approaches standards development matters is open, accountable, consultative and transparent. Public submissions were called to obtain the views of interested parties on the draft variation.

The draft variation was considered for approval by the FSANZ Board having regard to the submission made during the call for submissions period.

## **2.5 FSANZ Act assessment requirements**

### **2.5.1 Section 29**

#### ***2.5.1.1 Consideration of costs and benefits***

The Office of Impact Analysis<sup>4</sup> granted FSANZ a standing exemption from the requirement to develop a Regulatory Impact Statement for applications relating to permitting processing aids and GM foods (OBPR correspondence dated 24 November 2010, reference 12065). This standing exemption was provided as permitting processing aids and GM foods is deregulatory as their use will be voluntary if the application concerned is approved. This standing exemption relates to the introduction of a food to the food supply that has been determined to be safe.

FSANZ, however, gave consideration to the costs and benefits that may arise from the proposed measure for the purposes of meeting FSANZ Act considerations. The FSANZ Act requires FSANZ to have regard to whether costs that would arise from the proposed measure outweigh the direct and indirect benefits to the community, government or industry that would arise from the proposed measure (paragraph 29(2)(a)).

The purpose of this consideration was to determine if the community, government, and industry as a whole is likely to benefit, on balance, from a move from the status quo (where status quo is rejecting the application). This analysis considered permitting the use of the enzyme pullulanase, sourced from *B. subtilis*, containing the pullulanase gene from *B. deramificans*, as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates.

The consideration of the costs and benefits in this section was not intended to be an exhaustive, quantitative economic analysis of the proposed measures and, in fact, most of the effects that were considered cannot easily be assigned a dollar value. Rather, the assessment sought to highlight the potential positives and negatives of moving away from the status quo by permitting the use of this processing aid.

FSANZ's conclusions regarding the costs and benefits of the proposed measure are set out below.

#### ***Costs and benefits of permitting the use of this enzyme as a processing aid***

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<sup>4</sup> Formerly known as the Office of Best Practice Regulation (OBPR)

### *Industry*

Industry may benefit from being able to use this enzyme as a processing aid to assist in the production of glucose syrups and other starch hydrolysates. Due to the voluntary nature of the permission, industry will only use this enzyme as a processing aid where they believe a net benefit exists for them in terms of cost savings. Pullulanase has been approved for use in Denmark, which may be a business opportunity for Australian and New Zealand industries. There may also be competing imports from this country.

### *Consumers*

If industry were to experience cost savings as a result of using this enzyme as a processing aid, industry may pass on some of the cost savings onto consumers. Consumers may benefit from a greater availability of foods in addition to potential cost savings.

### *Government*

Permitting the use of this enzyme as a processing aid may result in a small, inconsequential cost to government in terms of an addition to the current range of processing aids that are already monitored for compliance.

### *Conclusions from cost benefit considerations*

FSANZ's assessment was that the direct and indirect benefits that arise from permitting this pullulanase enzyme for use as a processing aid in starch processing for production of glucose syrups and other starch hydrolysates, most likely outweigh the associated costs.

#### **2.5.1.2 Other measures**

There are no other measures (whether available to FSANZ or not) that would be more cost-effective than a food regulatory measure developed or varied as a result of the application.

#### **2.5.1.3 Any relevant New Zealand standards**

The relevant Schedule applies in both Australia and New Zealand. There are no relevant New Zealand only standards.

#### **2.5.1.4 Any other relevant matters**

Other relevant matters are considered below.

### **2.5.2. Subsection 18(1)**

FSANZ has also considered the three objectives in subsection 18(1) of the FSANZ Act during the assessment.

#### **2.5.2.1 Protection of public health and safety**

FSANZ undertook a safety assessment (see SD1) and concluded there were no public health and safety concerns associated with the proposed use of this enzyme.

#### **2.5.2.2 The provision of adequate information relating to food to enable consumers to make informed choices**

The labelling requirements for this enzyme are discussed in section 1.3.3 of this report.

#### **2.5.2.3 The prevention of misleading or deceptive conduct**

There are no issues identified with this application relevant to this objective.

### 2.5.3 Subsection 18(2) considerations

FSANZ has also had regard to:

- **the need for standards to be based on risk analysis using the best available scientific evidence**

FSANZ used the best available scientific evidence to conduct the risk analysis, which is provided in SD1. The applicant submitted a dossier of information and scientific literature as part of their application. This dossier, together with other technical and scientific information, was considered by FSANZ in assessing the application.

- **the promotion of consistency between domestic and international food standards**

There are no Codex Alimentarius Standards for processing aids or enzymes. The enzyme processing aid would have to comply with international specifications for enzyme preparations, being the JECFA Combined Compendium of Food Additive Specifications and the Food Chemicals Codex specifications for enzymes referred to in section 1.3.2 of this report.

- **the desirability of an efficient and internationally competitive food industry**

The approval for use of this enzyme would bring Australia and New Zealand into line with the other countries where it is already authorised for use. In this way, Australia and New Zealand will remain competitive with other international markets. This will also help foster continued innovation and improvements in food manufacturing techniques and processes.

The conclusion of the risk assessment is there are no public health and safety concerns associated with the production microorganism or with using the enzyme as a food processing aid. It is therefore appropriate that Australian and New Zealand food industries are given the opportunity to benefit from the proposed use of this alternative enzyme.

Ultimately, the domestic food industry will make their own economic decisions, taking into account the costs and benefits of using the new enzyme, to determine if it is of benefit to their particular business.

- **the promotion of fair trading in food**

No issues were identified for this application relevant to this objective.

- **any written policy guidelines formulated by the Food Ministers' Meeting**

The Ministerial Policy Guideline *Addition to Food of Substances other than Vitamins and Minerals*<sup>5</sup> includes specific order policy principles for substances added to achieve a solely technological function, such as processing aids. These specific order policy principles state that permission should be granted where:

- the purpose for adding the substance can be articulated clearly by the manufacturer as achieving a solely technological function (i.e. the 'stated purpose')
- the addition of the substance to food is safe for human consumption
- the amounts added are consistent with achieving the technological function

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<sup>5</sup> <https://foodregulation.gov.au/internet/fr/publishing.nsf/Content/publication-Policy-Guideline-on-the-Addition-of-Substances-other-than-Vitamins-and-Minerals>

- the substance is added in a quantity and a form which is consistent with delivering the stated purpose
- no nutrition, health or related claims are to be made in regard to the substance.

FSANZ determined that permitting the proposed use of this enzyme as a processing aid is consistent with these specific order policy principles for 'Technological Function'. All other relevant requirements of the policy guideline are similarly met.

### **3 References**

FAO/WHO (2006) Combined compendium of food additive specifications, Food and Agriculture Organization of the United Nations, Rome. <http://www.fao.org/docrep/009/a0691e/A0691E03.htm>

FCC (2022) Food Chemicals Codex, 13th edition. Rockville (MD): United States Pharmacopeial Convention <http://publications.usp.org/>

IUBMB (2023) EC 3.2.1.41 <https://iubmb.qmul.ac.uk/enzyme/EC3/2/1/41.html>

### **Attachments**

- A. Approved draft variation to the Australia New Zealand Food Standards Code
- B. Explanatory Statement
- C. Draft variation to the Australian New Zealand Food Standards Code (Call for Submissions)

## Attachment A – Approved draft variation to the Australia New Zealand Food Standards Code



### Food Standards (Application A1250 – Pullulanase from GM *Bacillus subtilis* (gene donor: *Bacillus deramificans*) as a processing aid) Variation

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The Board of Food Standards Australia New Zealand gives notice of the making of this variation under section 92 of the *Food Standards Australia New Zealand Act 1991*. The variation commences on the date specified in clause 3 of this variation.

Dated [To be completed by the Delegate]

[Insert Delegate's name and position title]

Delegate of the Board of Food Standards Australia New Zealand

#### Note:

This variation will be published in the Commonwealth of Australia Gazette No. FSC XX on XX Month 20XX. This means that this date is the gazettal date for the purposes of clause 3 of the variation.

**1 Name**

This instrument is the *Food Standards (Application A1250 – Pullulanase from GM Bacillus subtilis (gene donor: Bacillus deramificans) as a processing aid) Variation*.

**2 Variation to a Standard in the Australia New Zealand Food Standards Code**

The Schedule varies a Standard in the *Australia New Zealand Food Standards Code*.

**3 Commencement**

The variation commences on the date of gazettal.

**Schedule**

**Schedule 18—Processing aids**

**[1] Subsection S18—9(3) (table)**

Insert:

Pullulanase (EC 3.2.1.41) sourced from <i>Bacillus subtilis</i> containing the pullulanase gene from <i>Bacillus deramificans</i>	For use in starch processing for production of glucose syrups and other starch hydrolysates	GMP
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## Attachment B – Explanatory Statement

### EXPLANATORY STATEMENT

*Food Standards Australia New Zealand Act 1991*

#### ***Food Standards (Application A1250 – Pullulanase from GM Bacillus subtilis (gene donor: Bacillus deramificans) as a processing aid) Variation***

##### **1. Authority**

Section 13 of the *Food Standards Australia New Zealand Act 1991* (the FSANZ Act) provides that the functions of Food Standards Australia New Zealand (the Authority) include the development of standards and variations of standards for inclusion in the *Australia New Zealand Food Standards Code* (the Code).

Division 1 of Part 3 of the FSANZ Act specifies that the Authority may accept applications for the development or variation of food regulatory measures, including standards. This Division also stipulates the procedure for considering an application for the development or variation of food regulatory measures.

The Authority accepted Application A1250 which seeks to amend the Code to permit the use of a pullulanase enzyme (EC 3.2.1.41) sourced from a specific genetically modified (GM) strain of *Bacillus subtilis* containing the pullulanase gene from *Bacillus deramificans*, as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates. The Authority considered the Application in accordance with Division 1 of Part 3 and has approved a draft variation - the *Food Standards (Application A1250 – Pullulanase from GM Bacillus subtilis (gene donor: Bacillus deramificans) as a processing aid) Variation*.

Following consideration by the Food Ministers' Meeting (FMM), section 92 of the FSANZ Act stipulates that the Authority must publish a notice about the draft variation.

##### **2. Variation is a legislative instrument**

The approved draft variation is a legislative instrument for the purposes of the *Legislation Act 2003* (see section 94 of the FSANZ Act) and is publicly available on the Federal Register of Legislation ([www.legislation.gov.au](http://www.legislation.gov.au)).

This instrument is not subject to the disallowance or sunset provisions of the *Legislation Act 2003*. Subsections 44(1) and 54(1) of that Act provide that a legislative instrument is not disallowable or subject to sunset if the enabling legislation for the instrument (in this case, the FSANZ Act): (a) facilitates the establishment or operation of an intergovernmental scheme involving the Commonwealth and one or more States; and (b) authorises the instrument to be made for the purposes of the scheme. Regulation 11 of the *Legislation (Exemptions and other Matters) Regulation 2015* also exempts from sunset legislative instruments a primary purpose of which is to give effect to an international obligation of Australia.

The FSANZ Act gives effect to an intergovernmental agreement (the Food Regulation Agreement) and facilitates the establishment or operation of an intergovernmental scheme (national uniform food regulation). That Act also gives effect to Australia's obligations under an international agreement between Australia and New Zealand. For these purposes, the Act establishes the Authority to develop food standards for consideration and endorsement by

the FMM. The FMM is established under the Food Regulation Agreement and the international agreement between Australia and New Zealand, and consists of New Zealand, Commonwealth and State/Territory members. If endorsed by the FMM, the food standards on gazettal and registration are incorporated into and become part of Commonwealth, State and Territory and New Zealand food laws. These standards or instruments are then administered, applied and enforced by these jurisdictions' regulators as part of those food laws.

### **3. Purpose**

The Authority has approved a draft variation amending the table to subsection S18—9(3) in Schedule 18 of the Code to permit the use of the enzyme pullulanase (EC 3.2.1.41) sourced from a specific genetically modified strain of *B. subtilis*, containing the pullulanase gene from *Bacillus deramificans*, as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates. If approved, this permission would be subject to the condition that the maximum permitted level or amount of the enzyme that may be present in the food must be consistent with Good Manufacturing Practice (GMP).

### **4. Documents incorporated by reference**

The approved draft variation does not incorporate any documents by reference.

However, existing provisions of the Code incorporate documents by reference that will prescribe identity and purity specifications for the processing aid to be permitted by the approved draft variation. Section 1.1.1—15 of the Code requires substances used as processing aids to comply with any relevant identity and purity specifications listed in Schedule 3 of the Code. Section S3—2 of Schedule 3 incorporates by reference the specifications listed in the Joint FAO/WHO Expert Committee on Food Additives (JECFA) Combined Compendium of Food Additive Specifications (FAO JECFA Monographs 26 (2021)) and the United States Pharmacopeial Convention (2022) Food Chemicals Codex (13th edition). These include general specifications for the identity and purity of enzyme preparations used in food processing.

### **5. Consultation**

In accordance with the procedure in Division 1 of Part 3 of the FSANZ Act, the Authority's consideration of application A1250 included one round of public consultation following an assessment and the preparation of a draft variation and associated report. Submissions were called for on 15 June 2023 for a six-week consultation period.

The Office of Impact Analysis<sup>6</sup> granted the Authority a standing exemption from the requirement to develop a Regulatory Impact Statement for applications relating to permitting new processing aids and genetically modified foods (OBPR correspondence dated 24 November 2010, reference 12065). This standing exemption was provided as permitting new processing aids and genetically modified foods is deregulatory as their use will be voluntary if the application concerned is approved. This standing exemption relates to the introduction of a food to the food supply that has been determined to be safe.

### **6. Statement of compatibility with human rights**

This instrument is exempt from the requirements for a statement of compatibility with human rights as it is a non-disallowable instrument under section 44 of the *Legislation Act 2003*.

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<sup>6</sup> Formerly known as the Office of Best Practice Regulation (OBPR)



## 7. Variation

Clause 1 of the variation provides that the name of the variation is the *Food Standards (Application A1250 – Pullulanase from GM Bacillus subtilis (gene donor: Bacillus deramificans) as a processing aid) Variation*.

Clause 2 of the variation provides that the Code is amended by the Schedule to the variation.

Clause 3 of the variation provides that the variation will commence on the date of gazettal of the instrument.

**Item [1]** of the Schedule to the variation inserts a new entry into the table to subsection S18—9(3) of the Code. The new entry is inserted in alphabetical order and consists of the following enzyme in column 1 of the table:

- 'Pullulanase (EC 3.2.1.41) sourced from *Bacillus subtilis* containing the pullulanase gene from *Bacillus deramificans*'

The permitted technological purpose for this enzyme is prescribed in column 2 of the table as use as a processing aid for use in starch processing for production of glucose syrups and other starch hydrolysates.

The permission is subject to the condition, as prescribed in column 3 of the table, that the maximum permitted level or amount of this enzyme that may be present in the food must be consistent with GMP.

The effect of item [1] of the Schedule to the variation is to permit the proposed use of the enzyme pullulanase (EC 3.2.1.41) sourced from *Bacillus subtilis* containing the pullulanase gene from *Bacillus deramificans* as a processing aid in accordance with the Code.

## Attachment C – Draft variation to the Australia New Zealand Food Standards Code (Call for Submissions)



### Food Standards (Application A1250 – Pullulanase from GM *Bacillus subtilis* (gene donor: *Bacillus deramificans*) as a processing aid) Variation

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The Board of Food Standards Australia New Zealand gives notice of the making of this variation under section 92 of the *Food Standards Australia New Zealand Act 1991*. The variation commences on the date specified in clause 3 of this variation.

Dated [To be completed by the Delegate]

[Insert Delegate's name and position title]

Delegate of the Board of Food Standards Australia New Zealand

#### Note:

This variation will be published in the Commonwealth of Australia Gazette No. FSC XX on XX Month 20XX. This means that this date is the gazettal date for the purposes of clause 3 of the variation.

**1 Name**

This instrument is the *Food Standards (Application A1250 – Pullulanase from GM Bacillus subtilis (gene donor: Bacillus deramificans) as a processing aid) Variation*.

**2 Variation to a Standard in the *Australia New Zealand Food Standards Code***

The Schedule varies a Standard in the *Australia New Zealand Food Standards Code*.

**3 Commencement**

The variation commences on the date of gazettal.

**Schedule**

**Schedule 18—Processing aids**

**[1] Subsection S18—9(3) (table)**

Insert:

Pullulanase (EC 3.2.1.41) sourced from <i>Bacillus subtilis</i> containing the pullulanase gene from <i>Bacillus deramificans</i>	For use in starch processing for production of glucose syrups and other starch hydrolysates	GMP
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