14 July 2026
403-26

Call for submissions – Application A1321

Acetolactate decarboxylase from *Bacillus licheniformis* (gene donor: *Brevibacillus brevis*) for use as a processing aid

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Food Standards Australia New Zealand (FSANZ) has assessed an application made by Novonesis Australia Pty Ltd to permit the use of the enzyme acetolactate decarboxylase as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine and other yeast fermented beverages and has prepared a draft food regulatory measure. Pursuant to section 31 of the *Food Standards Australia New Zealand Act 1991* (FSANZ Act), FSANZ now calls for submissions to assist consideration of the draft food regulatory measure.

Submissions on this application need to be made through the Consultation Hub. All submissions on this application will be published on the Consultation Hub. We will not publish material that we accept as confidential. In-confidence submissions may be subject to release under the provisions of the *Freedom of Information Act 1982*. Submissions will be published following consultation and before the next stage in the statutory assessment process.

Under section 114 of the FSANZ Act, some information provided to FSANZ cannot be disclosed. More information about the disclosure of confidential commercial information is available on the FSANZ website at Making a submission. For information on how FSANZ manages personal information when you make a submission, see FSANZ's Privacy Policy.

FSANZ also accepts submissions in hard copy to our Australia and/or New Zealand offices. There is no need to send an email or hard copy of your submission if you have submitted it through the FSANZ Consultation Hub.

DEADLINE FOR SUBMISSIONS: 11:59pm (Canberra time) 25 August 2026

Submissions received after this date will not be considered unless an extension had been given before the closing date. Extensions will only be granted due to extraordinary circumstances during the submission period. Any agreed extension will be notified on the FSANZ website and will apply to all submitters.

For information about making a submission, visit the FSANZ website at current calls for public comment and how to make a submission.

Questions about making a submission or application and proposal processes can be sent to standards.management@foodstandards.gov.au.

Submissions in hard copy may be sent to the following addresses:

Food Standards Australia New Zealand
PO Box 5423
KINGSTON ACT 2604
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PO Box 10559
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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

Executive summary

Novozymes Australia Pty Ltd (now trading as Novonesis Australia Pty Ltd) has applied to amend the Australia New Zealand Food Standards Code (the Code) to permit the use of the enzyme acetolactate decarboxylase (EC 4.1.1.5) as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine and other yeast fermented beverages. The enzyme is produced by *Bacillus licheniformis* containing the acetolactate decarboxylase gene from *Brevibacillus brevis*.

The proposed use of acetolactate decarboxylase is technologically justified in the quantity and form stated by the applicant during the manufacture of beer, wine and other yeast fermented beverages. The enzyme does not perform a technological function in the food for sale, therefore functioning as a processing aid for the purposes of the Code. There are relevant identity and purity specifications in the Code with which the enzyme must comply when added to food or sold for use in food.

FSANZ concluded there are no safety concerns with the use of acetolactate decarboxylase produced by *B. licheniformis* under the proposed conditions of use.

Following assessment, for reasons set out in this report, FSANZ has prepared a draft variation to amend the table to subsection S18—9(3) of the Code by listing this enzyme and its associated technological purpose in the table. This table lists substances (including enzymes) permitted to be used as processing aids for specific technological purposes.

The effect of the draft variation, if approved, would be to permit the use of this enzyme as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine (manufactured in New Zealand) and other yeast fermented beverages, in accordance with the Code. The enzyme would have to be used at a level consistent with Good Manufacturing Practice (GMP).

Standard 4.5.1 already permits this enzyme to be used as a processing aid in the manufacture of wine in Australia. This permission is subject to the condition that the maximum permitted level or amount of this enzyme that may be present in the wine must be consistent with GMP.

FSANZ now seeks submissions on the draft variation of the Code.

1 Introduction

1.1 The applicant

The applicant is Novozymes Australia Pty Ltd,[1] an international biotechnology company that develops enzymes and microorganism cultures for use in the food and beverage industry.

1.2 The application

The stated purpose of the application is to amend the Australia New Zealand Food Standards Code (the Code) to permit the use of the enzyme acetolactate decarboxylase (EC 4.1.1.5) as a processing aid in brewing processes, other cereal based beverage processes and beverage alcohol (distilling) processes. The applicant subsequently confirmed that the application's intent is to permit the enzyme's use in the manufacture of beer, wine and other yeast fermented beverages to reduce the formation of diacetyl during yeast fermentation. The enzyme is produced by *Bacillus licheniformis* containing the gene for acetolactate decarboxylase from *Brevibacillus brevis*.

Acetolactate decarboxylase is used as a processing aid during yeast fermentation to convert alpha-acetolactate into acetoin to reduce the formation of diacetyl, a compound that imparts an off-flavour.

The applicant has indicated that the enzyme would be used in accordance with Good Manufacturing Practice (GMP).[2]

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

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 the use of that substance 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
- it is a substance listed in Schedule 18 or identified in section S16—2 as an additive permitted at GMP.

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[1] Now trading as Novonesis Australia Pty Ltd.

[2] GMP is defined in section 1.1.2—2 of the Code as follows: ***GMP*** *or* ***Good Manufacturing Practice****, with respect to the addition of substances used as food additives and substances used as processing aids to food, means the practice of:*

(a) limiting the amount of substance that is added to food to the lowest possible level necessary to accomplish its desired effect; and

(b) to the extent reasonably possible, reducing the amount of the substance or its derivatives that:

(i) remains as a *component of the food as a result of its use in the manufacture, processing or packaging; and

(ii) is not intended to accomplish any physical or other technical effect in the food itself;

(c) preparing and handling the substance in the same way as a food ingredient.

Standard 1.3.3 and Schedule 18 list the 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. An enzyme of microbial origin listed in the table to subsection S18—4(5) is 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.

Acetolactate decarboxylase is currently permitted in the table to subsection S18—4(5) (as α-acetolactate decarboxylase) when sourced from the following microorganisms: *Bacillus amyloliquefaciens*, *Bacillus subtilis*, and *B. subtilis* containing the gene for acetolactate decarboxylase from *Bacillus brevis* (*Brevibacillus brevis* was formerly known as *Bacillus brevis*).

Acetolactate decarboxylase from *B. licheniformis* containing the acetolactate decarboxylase gene from *B. brevis* is not listed in the table to subsection S18—4(5) nor the table to subsection S18—9(3) and so is not currently a permitted processing aid for use in food processing.

Standard 4.5.1 – Wine production requirements is an Australia-only standard in the Code. The table to clause 4 of Standard 4.5.1 lists substances permitted for use as processing aids in the production of wine, sparkling wine and fortified wine in Australia. That use is subject to any relevant compositional requirements set out in clause 5 of this Standard. The table to clause 4 lists 'Enzymes' as a permitted processing aid for use in the production of wine, sparkling wine and fortified wine in Australia. Therefore, the applicant's enzyme is already permitted to be used as a processing aid in the manufacture of wine in Australia subject to the condition that the maximum permitted level or amount of this enzyme present in the wine must be consistent with GMP.

1.3.2 Identity and purity requirements

Paragraph 1.1.1—15(1)(b) of the Code requires substances used as processing aids in food to comply with any relevant identity and purity specifications listed in Schedule 3 of the Code when added to food in accordance with the Code or sold for use in food.

Subsection S3—2(1) of the Code incorporates by reference the specifications listed in the Joint Food and Agriculture Organization/World Health Organization (FAO/WHO) Expert Committee on Food Additives (JECFA) Combined Compendium of Food Additive Specifications (FAO JECFA Monographs 34 (2025)), and the United States Pharmacopeial Convention (2024) Food Chemicals Codex (14th edition). These include general specifications for enzyme preparations used in food processing for identity and purity parameters.

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.

1.4 International standards

1.4.1 International

In developing food regulatory measures, 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 'general standard' for processing aids. However, as noted in section 1.3.2 of this report, there are internationally recognised specifications for enzyme preparations established by JECFA and Food Chemicals Codex.

Additionally, 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.

The Organisation Internationale de la Vigne et du Vin, or International Organisation of Vine and Wine (OIV), is an intergovernmental organisation that sets global standards and provides scientific and technical guidance on viticulture, winemaking, wine, wine-based beverages and other vine-based products. Its International Code of Oenological Practices comprises approved oenological treatments and practices and guidelines for good practice to ensure safety and quality in wine production and its International Oenological Codex consists of internationally recognised specifications for substances used in winemaking. This includes general considerations and specifications for enzyme preparations.

1.4.2 Overseas regulations

The applicant's acetolactate decarboxylase from *B. licheniformis* has been authorised for use in Denmark (for brewing and other cereal based beverage processes) and approved for use in Mexico (no purpose specified). It is also included in the French positive list for processing aids (for brewing).

1.5 Reasons for accepting the application

The application was accepted for assessment because:

- it complied with the procedural requirements under subsection 22(2) of the *Food Standards Australia New Zealand Act 1991* (FSANZ Act), and
- it related to a matter that warranted the variation of a food regulatory measure.

1.6 Procedure for assessment

The application is being assessed under the General Procedure in accordance with the FSANZ Act.

2 Summary of the assessment

FSANZ has undertaken an assessment to determine whether the enzyme achieves its technological purpose in the quantity and form proposed, and to evaluate public health and safety risks that may arise from its use (see Supporting Document 1 (SD1)). Summaries of both assessments are provided below.

2.1 Food technology assessment

Acetolactate decarboxylase performs its technological function to reduce diacetyl formation during yeast fermentation in the manufacture of beer, wine and other yeast fermented beverages. It functions as a processing aid for the purposes of the Code, noting it does not perform a technological purpose in the final food.

The stated benefits of using the enzyme in these applications include the reduction of off-flavours in the final food and a faster maturation process.

FSANZ concluded that the available evidence provides adequate assurance that the enzyme's proposed use, in the proposed quantity and form (which must be consistent with GMP), is technologically justified.

There are relevant identity and purity specifications listed in Schedule 3 of the Code with which the enzyme will have to comply whenever it is added to food for sale in accordance with the Code or sold for such use. These are detailed in section 2.2.2 of SD1. Based on analytical data provided by the applicant, the enzyme met the relevant specifications.

2.2 Risk assessment

FSANZ did not identify any public health and safety concerns associated with the use of acetolactate decarboxylase produced by *B. licheniformis* containing the gene for acetolactate decarboxylase from *B. brevis* under the proposed use conditions.

The production organism is neither pathogenic nor toxigenic. Analysis of the production strain confirmed the presence and stability of the inserted DNA.

There is a history of use of acetolactate decarboxylase from *B. licheniformis* overseas, including in Denmark, France and Mexico. No significant homology between the enzyme and any known toxins or allergens was identified. The enzyme preparation is not expected to pose a food allergenicity concern under the proposed conditions of use.

There was no evidence of genotoxicity *in vitro* and no adverse effects were observed in a 13-week dietary toxicity study in rats. The no observed adverse effect level (NOAEL) was 644 mg/kg bw/day total organic solids (TOS), the highest dose tested.

The theoretical maximum daily intake (TMDI) of this acetolactate decarboxylase was calculated to be 0.02 mg TOS/kg bw/day. A comparison of the NOAEL and the TMDI results in a margin of exposure (MOE) of approximately 32,000.

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

For the reasons listed in this report, FSANZ decided to prepare a draft variation to the Code permitting the proposed use of acetolactate decarboxylase produced by *B. licheniformis* containing the gene for acetolactate decarboxylase from *B. brevis* as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine

(manufactured in New Zealand) and other yeast fermented beverages, in accordance with the Code. If approved, this permission would be subject to the condition that the maximum permitted level or amount of this enzyme present in the food must be consistent with GMP.

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

2.3.1 Regulatory approval

FSANZ has prepared a draft variation to permit the use of the applicant's enzyme as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine (manufactured in New Zealand) and other yeast fermented beverages, in accordance with the Code.

Standard 4.5.1 already permits this enzyme to be used as a processing aid in the manufacture of wine in Australia. The permission in Standard 4.5.1 is subject to the condition that the maximum permitted level or amount of this enzyme that may be present in the wine must be consistent with GMP.

2.3.2 Enzyme nomenclature, source microorganism nomenclature and specifications

The International Union of Biochemistry and Molecular Biology (IUBMB) lists the accepted name 'acetolactate decarboxylase' for EC 4.1.1.5 (see section 2.1 of SD1). The enzyme is currently permitted in Schedule 18 from several other sources as 'α-acetolactate decarboxylase'. To align the enzyme name with the accepted nomenclature established by the IUBMB, the proposed draft variation uses the name 'acetolactate decarboxylase', which is an explicit enzyme name given that there are no other biologically relevant forms of the substrate (acetolactate). FSANZ will take steps to update existing Code permissions that use the name 'α-acetolactate decarboxylase' through a Code Maintenance Proposal.

Nomenclature for the host and gene donor organisms – *Bacillus licheniformis* and *Brevibacillus brevis*, respectively – is in accordance with accepted international norms for bacterial taxonomy.

There are relevant identity and purity specifications in primary sources of specifications listed in Schedule 3 for enzyme preparations used in food processing (refer to section 1.3.2 of this report and section 2.2.2 of SD1). As stated above, this enzyme would have to comply with those specifications when added to food in accordance with the Code or sold for such use.

2.3.3 Labelling

The labelling provisions in the Code will apply to foods for sale that are manufactured using this processing aid (see Section 1.3.3 of this report).

2.3.4 Risk management conclusion

The risk management conclusion is to permit the enzyme acetolactate decarboxylase produced by *B. licheniformis* containing the gene for acetolactate decarboxylase from *B. brevis* as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine (manufactured in New Zealand) and other yeast fermented beverages, in accordance with the Code. If approved, the enzyme and its associated technological purpose would be listed in the table to subsection S18—9(3) of the Code, which includes enzymes permitted for a specific technological purpose. The maximum permitted level of the enzyme that may be present in the food would have to be an amount

consistent with GMP.

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 FSANZ Notification Circular, digital channels and Food Standards News.

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

The draft variation will be considered for approval by the FSANZ Board taking into account all public comments received from this call for submissions.

2.4.2 World Trade Organization

As members of the WTO, Australia and New Zealand are obliged to notify WTO members where proposed mandatory regulatory measures are not substantially the same as existing international standards and the proposed measure may have a significant effect on trade.

There are no relevant international standards (i.e. Codex) and amending the Code to permit the proposed use of this enzyme as a processing aid is unlikely to have a significant effect on international trade. Therefore, a notification to the WTO under Australia's and New Zealand's obligations under the WTO Technical Barriers to Trade or Application of Sanitary and Phytosanitary Measures Agreement was not considered necessary.

2.5 FSANZ Act assessment requirements

When assessing this application and the subsequent development of a food regulatory measure, FSANZ has had regard to the following matters in section 29 of the FSANZ Act:

2.5.1 Section 29

2.5.1.1 Consideration of costs and benefits

FSANZ has concluded that a Regulation Impact Statement is not required for this application. This is because permitting the applicant's proposed use of the enzyme acetolactate decarboxylase derived from the applicant's production source is determined to be safe and considered deregulatory in nature, as its use will be voluntary if the draft variation concerned is approved.

However, FSANZ had 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 (as per paragraph 29(2)(a) of the FSANZ Act).

The consideration of the costs and benefits in this section is not intended to be an exhaustive, quantitative economic analysis of the proposed measures. In fact, most of the effects that were considered cannot easily be assigned a dollar value. Rather, the assessment seeks to highlight the potential positives and negatives of moving away from the status quo by permitting the enzyme acetolactate decarboxylase derived from the applicant's new production source (adding to Schedule 18) for use as a processing aid – specifically to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine (manufactured in New Zealand) and other yeast fermented beverages, in accordance with

the Code.

FSANZ's conclusions regarding the costs and benefits of the proposed measure are set out below. However, information received from the call for submissions may result in FSANZ arriving at a different outcome.

Costs and benefits of the proposed measure

If the draft variation is approved, industry might benefit from production efficiencies from the proposed use of this enzyme and production source. Industry might pass on some such efficiencies as savings to consumers of the applicable beverages for which this enzyme is used. Due to the voluntary nature of the permission, industry would only use the new proposed permission where they believe a net benefit exists for them.

Permitting the proposed use of this enzyme as a processing aid might 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 of costs and benefits

FSANZ's assessment is that the direct and indirect benefits that would arise from permitting the proposed use of this enzyme as a processing aid would 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

Unless expressly stated otherwise, standards in the Code relevant to the regulation of processing aids in food generally apply in Australia and New Zealand. In those circumstances, there are no relevant New Zealand only standards.

However, in relation specifically to the manufacture of wine – the proposed permission would only apply to the enzyme being used as a processing aid in the manufacture of wine in New Zealand, not to the manufacture of wine in Australia.

This is because, as explained in section 1.3.1 of this report, Standard 4.5.1 applies to the manufacture of wine in Australia only and already permits the use of this enzyme as a processing aid in the manufacture of wine in Australia.

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 3 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 risk and technical assessment and concluded there were no public health and safety concerns associated with the proposed use of this enzyme (see section 2.2 of this report and SD1).

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 2.3.3 of this report.

2.5.2.3 The prevention of misleading or deceptive conduct

There were 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. 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 risk assessment is provided in SD1.

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

In terms of food safety, the relevant international standard setting body is Codex. There is no Codex 'general standard' for enzymes, however, as noted in section 1.3.2 of this report, there are internationally recognised specifications for enzyme preparations established by JECFA and Food Chemicals Codex, with which this enzyme would have to comply when added to food in accordance with the Code or sold for use in food.

There is also 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 (see section 1.4.1 of this report).

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

Australia and New Zealand will remain competitive with international markets where approval for the use of the enzyme is granted. This will also help foster continued innovation and improvements in food manufacturing techniques and processes.

The conclusion of the risk and technical assessment is that there are no public health and safety concerns associated with the proposed use of this enzyme as a processing aid. It is therefore appropriate that Australian and New Zealand food industries are given the opportunity to benefit from the use of this enzyme for the applications proposed by the applicant. Ultimately, the 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 Food Ministers' Meeting**

The Ministerial Policy Guideline *Addition to Food of Substances other than Vitamins and*

Minerals[3] 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
- 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 would be consistent with these specific order policy principles for 'technological function'. All other relevant requirements of the policy guideline would be similarly met.

3 Draft variation

The draft variation to the Code is at Attachment A and is intended to take effect on gazettal.

A draft 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.

Attachments

A. Draft variation to the Australia New Zealand Food Standards Code
B. Draft Explanatory Statement

[3] https://www.foodregulation.gov.au/resources/publications/policy-guideline-addition-substances-other-vitamins-and-minerals, https://www.foodregulation.gov.au/resources/publications/policy-guideline-fortification-foods-vitamins-and-minerals

Attachment A – Draft variation to the Australia New Zealand Food Standards Code

Food Standards (Application A1321 – Acetolactate decarboxylase from *Bacillus licheniformis* (gene donor: *Brevibacillus brevis*) for use 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]

[Name of Delegate]
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 the above notice.

1 Name

This instrument is the *Food Standards (Application A1321 – Acetolactate decarboxylase from* Bacillus licheniformis *(gene donor:* Brevibacillus brevis*) for use 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:

Acetolactate decarboxylase (EC 4.1.1.5) sourced from *Bacillus licheniformis* containing the acetolactate decarboxylase gene from *Brevibacillus brevis*	To reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine and other yeast fermented beverages.	GMP

Attachment B – Draft Explanatory Statement

DRAFT EXPLANATORY STATEMENT

Food Standards Australia New Zealand Act 1991

Food Standards (Application A1321 – Acetolactate decarboxylase from* Bacillus licheniformis *(gene donor:* Brevibacillus brevis*) for use 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 A1321 which seeks to permit the use of the enzyme acetolactate decarboxylase, produced by *Bacillus licheniformis* containing the acetolactate decarboxylase gene from *Brevibacillus brevis*, as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine and other yeast fermented beverages. The Authority considered the Application in accordance with Division 1 of Part 3 and has prepared a draft variation – the *Food Standards (Application A1321 – Acetolactate decarboxylase from* Bacillus licheniformis *(gene donor:* Brevibacillus brevis*) for use as a processing aid) Variation* (the draft variation).

2. Variation will be a legislative instrument

If approved, the draft variation would be a legislative instrument for the purposes of the *Legislation Act 2003* (see section 94 of the FSANZ Act) and be publicly available on the Federal Register of Legislation (www.legislation.gov.au).

If approved, this instrument would not be subject to the disallowance or sunsetting 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 sunsetting 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 sunsetting 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 Food Ministers Meeting (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 prepared a draft variation amending the table to subsection S18—9(3) in Schedule 18 of the Code to permit the use of the enzyme Acetolactate decarboxylase (EC 4.1.1.5), produced by *Bacillus licheniformis* containing the acetolactate decarboxylase gene from *Brevibacillus brevis*, as a processing aid to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine (manufactured in New Zealand) and other yeast fermented beverages, in accordance with the Code. If the draft variation is 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 draft variation does not incorporate any documents by reference.

However, existing provisions of the Code incorporate documents by reference that would prescribe identity and purity specifications for the processing aid to be permitted by the draft variation (if approved). 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 when added to food in accordance with the Code or sold for use in food. Section S3—2 of Schedule 3 incorporates by reference the specifications listed in the Joint FAO/WHO Expert Committee on Food Additives (JECFA) Compendium of Food Additive Specifications (FAO/WHO 2025) and the United States Pharmacopeial Convention (2024) Food Chemicals Codex (14th edition). These include general specifications for the identity and purity parameters 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 A1321 will include one round of public consultation following an assessment and the preparation of a draft variation and associated assessment summary. A call for submissions (including the draft variation) will be open for a 6-week consultation period. Further details of the consultation process, the issues raised during consultation and by whom, and the Authority's response to these issues are available in an approval report published on the Authority's website at www.foodstandards.gov.au.

A regulation impact statement (RIS) has not been prepared. FSANZ's assessment is that a RIS is not required for this application. This is on the basis that the application is minor and deregulatory in nature. Also, the application seeks to permit the use as a processing aid of an enzyme from a new production source found to be safe and, if the draft variation concerned is approved, that use would be voluntary. This position is consistent with earlier advice from the Office of Impact Analysis (OIA23- 06225)[4].

6. Statement of compatibility with human rights

If approved, this instrument would be exempt from the requirements for a statement of compatibility with human rights as it would be a non-disallowable instrument under section 44 of the *Legislation Act 2003*.

[4] Regulatory Impact Analysis Guide for Ministers' Meetings and National Standard Setting Bodies | The Office of Impact Analysis (pmc.gov.au).

7. Variation

References to 'variation' in this section are references to the draft variation.

Clause 1 of the variation provides that the name of the variation is the *Food Standards (Application A1321 – Acetolactate decarboxylase from* Bacillus licheniformis *(gene donor:* Brevibacillus brevis*) for use 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.

Schedule to the variation

Item [1] of the Schedule to the variation would insert a new entry, in alphabetical order, into the table to subsection S18—9(3) of the Code.

The new entry would consist of the following enzyme in column 1 of the table:

- 'Acetolactate decarboxylase (EC 4.1.1.5) sourced from *Bacillus licheniformis* containing the acetolactate decarboxylase gene from *Brevibacillus brevis'*

The permitted technological purpose for this enzyme would be prescribed in column 2 of the table i.e. to reduce the formation of diacetyl during yeast fermentation in the manufacture of beer, wine and other yeast fermented beverages.

The permission would be 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.

If approved, the effect of the proposed amendment would be to permit the use of the enzyme acetolactate decarboxylase (EC 4.1.1.5) from *Bacillus licheniformis* containing the acetolactate decarboxylase gene from *Brevibacillus brevis* as a processing aid, in accordance with the Code. The proposed technological purpose of this enzyme would be to reduce the formation of diacetyl during yeast fermentation in the manufacture of:

- beer,
- wine (manufactured in New Zealand), and
- other yeast fermented beverages.

Standard 4.5.1 already permits this enzyme to be used as a processing aid in the manufacture of wine in Australia. This permission is subject to the condition that the maximum permitted level or amount of this enzyme that may be present in the wine must be consistent with GMP.