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Approval report – Application A1306

Chitosan from white button mushrooms (*Agaricus bisporus*) for use as a processing aid

Food Standards Australia New Zealand (FSANZ) has assessed an application submitted by AB Mauri to permit the use of chitosan extracted from white button mushrooms (*Agaricus bisporus*) as a processing aid in wine, beer, cider and other alcoholic beverages.

On 16 April 2026, FSANZ sought submissions on a draft variation and published an associated report. FSANZ received one submission.

FSANZ approved the draft variation on 5 August 2026. The Food Ministers' Meeting¹ was notified of FSANZ's decision on 17 August 2026.

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

¹ 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 Application A1306 page on the FSANZ website²:

SD1 Risk and technical assessment report (unchanged at approval)

The published submissions from the call for submissions can be found on the [Application A1306](#) Consultation Hub page.

² [A1306 - Chitosan from white button mushrooms \(Agaricus bisporus\) for use as a processing aid. | Food Standards Australia New Zealand https://www.foodstandards.gov.au/food-standards-code/applications/a1338-triacylglycerol-lipase-as-a-processing-aid](https://www.foodstandards.gov.au/food-standards-code/applications/a1338-triacylglycerol-lipase-as-a-processing-aid)

Executive summary

AB Mauri applied to Food Standards Australia New Zealand (FSANZ) to amend the Australia New Zealand Food Standards Code (the Code) to permit the use of chitosan extracted from white button mushrooms (*Agaricus bisporus*) as a processing aid, namely, a fining and microbial stabilisation agent in wine, beer, cider and other alcoholic beverages.

Mushroom (*A. bisporus*) chitosan is listed in Schedule 16 of the Code and, as such, is permitted by the Code to be used as a food additive at levels consistent with Good Manufacturing Practice (GMP) in various foods (see section 1.3.1—3 and Schedule 15 of the Code). Also, according to section 1.3.3—4 of the Code, an ‘additive permitted at GMP’ may be used as a processing aid in any food, including beer, cider and other alcoholic beverages; and in wine (including sparkling and fortified wine) produced and sold in New Zealand, as well as that which is imported into and sold in Australia (including from New Zealand).

However, wine, sparkling wine and fortified wine produced in Australia must comply with the requirements of Standard 4.5.1 – Wine production requirements, which is an Australia-only standard. For Australian wine industry purposes, Standard 4.5.1 provides a definitive list of processing aids and food additives permitted for wine, sparkling wine and fortified wine produced in Australia. The standard underpins several international trade arrangements, including the European Union (EU) Wine Agreement and the World Wine Trade Group Mutual Acceptance Agreement, which reference Standard 4.5.1 as the basis for what is permitted in Australian wine. Clause 4 to Standard 4.5.1 lists the substances permitted for use as processing aids in the production of wine, sparkling wine and fortified wine in Australia. Chitosan from *A. bisporus* is not currently listed as a permitted substance in clause 4.

Based on the above, FSANZ has assessed the proposed use of chitosan from *A. bisporus* as a processing aid for the production of wine, sparkling wine and fortified wine in Australia, for the purposes of Standard 4.5.1 of the Code.

The evidence presented in the application provided adequate assurance that chitosan from *A. bisporus* performs its technological function as a fining and antimicrobial agent during the production of wine, sparkling wine and fortified wine – not in the final product. As such, it meets the definition of a processing aid for the purposes of the Code. There is a relevant identity and purity specification for chitosan from *A. bisporus* in section S3—55 of the Code, with which this substance would have to comply when added to food in accordance with the Code, or sold for use in food.

FSANZ’s risk assessment concluded there were no safety concerns from the use of chitosan from *A. bisporus* in the quantity and form required to perform its intended technological function in the production of wine, sparkling wine or fortified wine, which must be consistent with GMP.

Following assessment, FSANZ called for submissions on a draft variation to the Code on 16 April 2026, with a 6-week consultation period. One submission was received. Issues raised in that submission and FSANZ’s response to those issues are set out in section 2.1 of the report.

After considering the submissions, and for the reasons summarised in this report, FSANZ has approved the draft variation proposed at the call for submissions. The approved draft variation will amend Standard 4.5.1 by:

- listing 'mushroom (*Agaricus bisporus*) chitosan' in the table to clause 4 as a permitted processing aid in the production of wine, sparkling wine and fortified wine, and
- specifying that 'mushroom (*Agaricus bisporus*) chitosan' may only be used in the production of wine, sparkling wine and fortified wine as a fining and antimicrobial agent, consistent with the scope of FSANZ's assessment.

The permission will be subject to the condition that the maximum permitted level or amount of the substance that may be present in the food must be consistent with GMP. In addition, mushroom (*A. bisporus*) chitosan used for this purpose under Standard 4.5.1 will be required to meet relevant specifications listed in Schedule 3 of the Code when added to wine, sparkling wine or fortified wine, or sold for use in that food.

The effect of the approved draft variation will be to permit the use of mushroom (*A. bisporus*) chitosan as a processing aid in wine (including sparkling and fortified wine) produced in Australia as a fining and antimicrobial agent in accordance with the Code. This is consistent with the existing Code permission for its use as a processing aid, including as a fining and antimicrobial agent, in wine produced and sold in New Zealand and in wine imported into and sold in Australia (including from New Zealand).

1 Introduction

1.1 The applicant

The applicant is AB Mauri, a manufacturer of yeast and bakery ingredients. AB Biotek, a business division of AB Mauri, specialises in fermentation products for the alcoholic beverage 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 in wine, beer, cider and other alcoholic beverages of chitosan extracted from white button mushrooms (*Agaricus bisporus*) as a fining and antimicrobial agent for the removal of suspended solids and for microbial stabilisation.

A. bisporus is one of the most common and widely cultivated species of edible mushrooms. It includes several varieties, with the most familiar being white button mushrooms (in an immature form), brown button mushrooms (in a more mature form) and portobello mushrooms (in a fully mature form).

Chitosan is derived from chitin, a carbohydrate polymer synthesised by fungi such as *A. bisporus* (as well as various arthropods and molluscs). Chitosan has antimicrobial effects that decrease the growth of yeast and bacterial species. It also acts to remove impurities, such as contaminants.

The applicant has indicated that the substance would be used in accordance with Good Manufacturing Practice (GMP).³

1.2.1 Previous applications to FSANZ

FSANZ previously assessed and approved Application A1315⁴, which sought permission to use a mixture of chitosan and (1,3)-β-D-glucans extracted from *A. bisporus* as a food additive in food and beverage products. Mushroom (*A. bisporus*) chitosan was listed as an 'additive permitted at GMP' in Schedule 16 of the Code (as defined in section 1.1.2—11 of the Code). As such, mushroom (*A. bisporus*) chitosan is permitted to be used as a food additive in various foods in accordance with the Code (see section 1.3.1—3 and Schedule 15 of the Code), including at levels consistent with GMP in certain foods.

As an 'additive permitted at GMP' mushroom (*A. bisporus*) chitosan is also permitted to be used as a processing aid, including in:

³ 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.

⁴ Application A1315 – Chitosan and (1,3)-beta-glucans from white button mushrooms (*Agaricus bisporus*) as a food additive: <https://www.foodstandards.gov.au/food-standards-code/applications/A1315-chitosan-and-beta-glucans-from-white-button-mushrooms-as-food-additive>

- wine (including sparkling and fortified wine) produced and sold in New Zealand, as well as that which is imported into and sold in Australia (including from New Zealand), and
- beer, cider and other alcoholic beverages produced and sold in Australia and New Zealand. See section 1.3.1 below for further details.

1.2.2 Scope of current assessment

Wine, sparkling wine and fortified wine produced in Australia must comply with the requirements of Standard 4.5.1 – Wine production requirements, which is an Australia-only standard. Clause 4 to Standard 4.5.1 lists the substances permitted for use as processing aids in the production of wine, sparkling wine and fortified wine in Australia. As chitosan from *A. bisporus* is not currently listed in clause 4, FSANZ assessed its proposed use as a fining and antimicrobial agent for the production of wine, sparkling wine and fortified wine in Australia.

1.3 The current Standards

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) provides that food for sale (including wine) 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, and
- it is a substance listed in Schedule 18 or identified in section S16—2 as an additive permitted at GMP.

Two standards in the Code – Standard 1.3.3 and Standard 4.5.1 – provide permissions for the use of processing aids in wine manufacture.

Section 1.3.3—3 provides that a substance may be used as a processing aid in relation to food if:

- the substance is permitted to be used as a processing aid for that food by Standard 1.3.3, and
- the proportion of the substance that is used is no more than the maximum level necessary to achieve the technological purpose under conditions of GMP.

Section 1.3.3—4 permits an ‘additive permitted at GMP’ to be used as a processing aid in any food if it is used at a level necessary to achieve a technological purpose in the processing of that food.

Subsection 1.1.2—11(3) defines an ‘additive permitted at GMP’ as meaning a substance that is listed in section S16—2. Mushroom (*A. bisporus*) chitosan is listed in the table to section S16—2 as an additive permitted at GMP.

The above, in effect, permits the use of mushroom (*A. bisporus*) chitosan as a processing aid in:

- wine, including sparkling wine and fortified wine, produced and sold in New Zealand and in wine, including sparkling wine and fortified wine, imported into and sold in Australia (including from New Zealand), and
- beer, cider and other alcoholic beverages produced and sold in Australia and New Zealand.

The technological purpose of using mushroom (*A. bisporus*) chitosan as a processing aid in those foods includes, but is not limited to, acting as a fining and antimicrobial agent in the production of those foods.

The above permission does not apply to wine, sparkling wine and fortified wine produced in Australia.

Despite any contrary provision elsewhere in the Code, wine, sparkling wine and fortified wine produced in Australia must comply with the requirements of Standard 4.5.1, which is an Australia-only standard (see clause 2 of Standard 4.5.1).

For Australian wine industry purposes, Standard 4.5.1 provides a definitive list of permitted processing aids and food additives for wine, sparkling wine and fortified wine produced in Australia. The standard underpins several international trade arrangements, including the European Union (EU) Wine Agreement and the World Wine Trade Group Mutual Acceptance Agreement, which reference Standard 4.5.1 as the basis for what is permitted in Australian wine.

Clause 4 to Standard 4.5.1 lists the substances permitted for use as processing aids in the production of wine, sparkling wine and fortified wine in Australia. Chitosan from *A. bisporus* is not currently listed as a permitted substance for that purpose.

1.3.2 Identity and purity requirements

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

The specification in section S3—55 sets out relevant specifications for mushroom (*A. bisporus*) chitosan.

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, nor is there a Codex standard for wine. However, 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 non-mandatory international 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. The International Code of Oenological Practices includes resolutions for fungal chitosan as a fining and antimicrobial agent in wine (refer to section 2.3 of Supporting Document 1 (SD1)).

1.4.2 Overseas regulations

This chitosan preparation is approved for use in Canada and has been included in the Health Canada List of Permitted Preservatives as an antibacterial (Class 2) and antifungal (Class 3) preservative.

The United States of America (US) Food and Drug Administration (FDA) provided a 'no questions' response to a Generally Recognized as Safe (GRAS) notification (GRN 997) for this substance's use as an antimicrobial in a range of foods. GRAS notifications, and 'no questions' responses from the US FDA to GRAS notifications, do not constitute safety assessments by a national agency.

Fungal chitosan is approved as a fining and antimicrobial treatment in wine in the EU, according to the European Commission Regulation (EU) No 53/2011⁵. The permissions and functions are similar to those provided in the OIV resolutions, as shown in Appendix 13 of the regulation and section 2.3 of SD1.

As noted above, mushroom (*A. bisporus*) chitosan is permitted for use as a processing aid in relation to any food e.g. wine production in New Zealand under Standard 1.3.3 of the Code.

Further details on approvals by other regulatory agencies are provided in section 3.2.4 of SD1.

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 *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 was assessed under the General Procedure in accordance with the FSANZ Act.

⁵ <https://eur-lex.europa.eu/eli/reg/2011/53/oj/eng>

1.7 Decision

Following assessment, FSANZ prepared a draft variation amending the Code to permit the use in wine, sparkling wine and fortified wine produced in Australia of mushroom (*A. bisporus*) chitosan as a processing aid to perform the technological function of a fining and antimicrobial agent.

For the reasons outlined in this report and, after consideration of the submission received during the consultation period, FSANZ approved the draft variation proposed at the call for submissions without change. The approved draft variation takes effect on gazettal and 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 a draft variation to the Code from 16 April – 28 May 2026. One submission was received (see Table 1 below).

The submission is publicly available on the FSANZ website [Application A1306](#) Consultation Hub page.

Table 1: Summary of issues

Issue	Raised by	FSANZ response
Not supported. The submitter stated the toxicology data derived from non-human animal testing is of limited relevance due to the recognised challenges of trans-species extrapolation. The submitter cites a recent announcement by the USFDA to phase out animal testing requirements for drug safety. The submitter states re-testing should be conducted on humans, after which the application can be re-submitted. They also note that chitosan is a particularly low-risk substance.	Private individual – WSL	FSANZ would like to thank this submitter for their comments concerning the use of animals for toxicological testing. Toxicological data requirements for assessing the safety of substances added to, or present in, food are informed by internationally recognised risk assessment principles, including those established by the Food and Agriculture Organization of the United Nations and the World Health Organization. Consistent with these principles, FSANZ considers relevant laboratory animal data as part of the scientific weight-of-evidence used to characterise potential food-related health risks. FSANZ scientists are experienced in evaluating the relevance and limitations of such data for human health risk assessment, including the appropriateness of extrapolating findings from laboratory animal studies to humans. While no experimental model is a perfect substitute for humans, laboratory animal studies remain an internationally accepted and scientifically useful method for identifying and characterising the potential

Issue	Raised by	FSANZ response
		toxicity of substances in food. Such studies can provide information on possible effects across mammalian organs, tissues, physiological systems and metabolic processes, and are considered alongside other relevant evidence. Policy decisions by other countries to reduce or phase out animal testing requirements are matters for those countries and their regulatory frameworks. FSANZ's approach is based on risk analysis using the best available scientific evidence, consistent with its statutory objectives and internationally recognised principles for food safety assessment. This said, Australia and New Zealand recognise the 3Rs (Replacement, Reduction and Refinement) as critical components of the ethical, humane and responsible care and use of animals for scientific purposes. For this application, FSANZ considered the available toxicological and other relevant evidence and concluded there are no safety concerns associated with the proposed use of mushroom-derived chitosan under the stated conditions of use. FSANZ does not consider that testing in humans is required for this substance.

2.2 Food technology assessment

FSANZ undertook a food technology assessment to determine whether mushroom (*A. bisporus*) chitosan achieves its technological purpose in the quantity and form proposed.

FSANZ concluded chitosan from mushroom (*A. bisporus*) performs its intended technological function in fining and microbial stabilisation during the production of wine, sparkling wine and fortified wine. As such, it functions as a processing aid for the purposes of the Code and does not perform a technological purpose in the food for sale.

In the food technology assessment detailed in SD1, all references to 'wine' includes sparkling wine and fortified wine in accordance with the definitions for wine, sparkling wine and fortified wine in Standard 4.5.1—1 and Standard 1.1.2—2 of the Code.

There is a relevant identity and purity specification for chitosan from *A. bisporus* in the Code with which this substance will have to comply when it is added to food as a processing aid in accordance with the Code or sold for use in food.

2.3 Risk assessment

As stated in section 1.2.1 of this report, FSANZ assessed the public health and safety risks

associated with chitosan from *A. bisporus* as a food additive for Application A1315. FSANZ used that assessment as the basis of its evaluation of this Application A1306.

The risk and technical assessment conducted for Application A1315 identified no public health or safety concerns. *A. bisporus* is neither pathogenic nor toxigenic. No adverse effects of chitosan, chitosan oligomers or chitosan monomers were observed in toxicological studies. Genotoxicity studies showed no evidence of genotoxicity. Chitosan from *A. bisporus* is not expected to pose a food allergenicity concern under the proposed conditions of use. FSANZ conducted a literature review of toxicological and epidemiological evidence published since the Application A1315 assessment and did not identify any new studies that were relevant to the safety assessment.

A dietary exposure assessment was not conducted for this application as the dietary exposure scenario assessed for Application A1315 was inclusive of the dietary exposure scenario for Application A1306.

In evaluating this application, FSANZ also had regard to its previous risk assessment for the use of chitosan from *Aspergillus niger* in fining and for microbial stabilisation in wine and other alcoholic beverages, which concluded there were no public health and safety concerns associated with its proposed use (Application A1077⁶).

Based on the reviewed data, FSANZ affirmed that, in the absence of any identifiable hazard, an Acceptable Daily Intake (ADI) 'not specified' remained appropriate.

FSANZ concluded there are no safety concerns from the proposed use of chitosan from *A. bisporus* in the quantity and form required to perform its technological function in fining and microbial stabilisation in the production of wine, sparkling wine and fortified wine in Australia, which must be consistent with GMP.

2.4 Risk management

Following assessment, FSANZ prepared a draft variation and called for submissions on that draft variation for a period of 6 weeks.

The risk management options available to FSANZ following the call for submissions were to:

- approve the draft variation proposed following assessment, or
- approve that draft variation subject to such amendments as FSANZ considered necessary, or
- reject that draft variation.

The conclusion from the risk and technical assessment was that the proposed use of mushroom (*A. bisporus*) chitosan as a processing aid in the production of wine, sparkling wine and fortified wine in Australia, as a fining and antimicrobial agent was technologically justified and safe.

Having regard to the submission received and, for the reasons set out in this report, FSANZ considered it appropriate to approve the draft variation proposed following assessment (Attachment A).

2.4.1 Scope of permissions

The application sought permission for chitosan extracted from white button mushrooms

⁶ <https://www.foodstandards.gov.au/food-standards-code/applications/applicationa1077fung5726>

(*A. bisporus*) for use as a processing aid, specifically as a fining and antimicrobial agent, in the production of wine, beer, cider and other alcoholic beverages. Following assessment and having regard to the submission received, FSANZ's risk management decision continues to be to permit the proposed use of chitosan extracted from any variety of mushroom from *A. bisporus* as a processing aid in accordance with the Code, including (but not limited to) having to comply with the specifications in section S3—55 of the Code when added to food in accordance with the Code or sold for use in food.

A permission for chitosan from any variety (which ranges depending on maturity) of *A. bisporus* is consistent with FSANZ's risk assessment approach, which evaluates the source organism at the species level, not the varietal or developmental form. There is no evidence indicating any change in toxigenicity, pathogenicity or risk profile across the morphological forms of *A. bisporus*.

The approved draft variation will insert 'mushroom (*Agaricus bisporus*) chitosan' into the table to clause 4 of Standard 4.5.1 which lists substances permitted to be used as processing aids in the production of wine, sparkling wine and fortified wine in Australia. The technological purpose of mushroom (*A. bisporus*) chitosan will be restricted to that of a fining and antimicrobial agent. This permission will be subject to the condition that the maximum permitted level or amount of the processing aid present in a food must be consistent with GMP (see subclause 5(8) of Standard 4.5.1).

This permission will provide regulatory certainty for the industry in that mushroom (*A. bisporus*) chitosan will be permitted to be used as a processing aid, specifically as a fining and antimicrobial agent in wine, sparkling wine and fortified wine produced and sold in both Australia and New Zealand; as well as beer, cider and other alcoholic beverages produced and sold in both of those countries.

Having regard to the submissions received, and for the reasons set out in this report, FSANZ considers it appropriate to approve the draft variation proposed following assessment (Attachment A).

Risk management considerations for this application relating to the regulatory approval, specifications and labelling are discussed below.

2.4.2 Regulatory approval for processing aids

As stated above, FSANZ has approved a draft variation to Standard 4.5.1 to permit the use of mushroom (*A. bisporus*) chitosan as a processing aid in the production of wine, sparkling wine and fortified wine in Australia, for the technological purpose of a fining and antimicrobial agent, in accordance with the Code (see Attachment A). The express permission will also provide the permission for the substance's potential presence in the food for sale.

2.4.3 Specifications

As stated in section 1.3.2, 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 when added to food in accordance with the Code or sold for use in food.

There is a relevant identity and purity specification in section S3—55 for mushroom (*A. bisporus*) chitosan (refer to section 1.3.2 of this report).

2.4.4 Labelling

Relevant labelling provisions in the Code will apply to foods for sale that are manufactured

using mushroom (*A. bisporus*) chitosan as a processing aid (see section 1.3.3 of this report).

2.4.5 Risk management conclusion

The risk management conclusion is to permit the use of mushroom (*A. bisporus*) chitosan as a processing aid in the production of wine, sparkling wine and fortified wine in Australia. The processing aid will be listed in the table to clause 4 of Standard 4.5.1, which lists substances permitted to be used as processing aids in the production of wine, sparkling wine or fortified wine in Australia. Its use will be restricted to that of a fining and antimicrobial agent as requested in the application. That permission will be subject to the condition that the maximum permitted level or amount of mushroom (*A. bisporus*) chitosan present in the food must be consistent with GMP. The express permission for its use as a processing aid in Standard 4.5.1 of the Code will also provide the permission for its potential presence in the food for sale.

2.5 Risk communication

2.5.1 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, FSANZ's digital channels and Food Standards News.

The process by which FSANZ considers standards development matters is open, accountable, consultative and transparent. Public submissions were called to assist consideration of the draft variation to the Code. FSANZ acknowledges the time taken by the individual who made a submission on this application.

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

2.6 FSANZ Act assessment requirements

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

2.6.1 Section 29

2.6.1.1 Consideration of costs and benefits

FSANZ assessed that a Regulation Impact Statement was not required for this application. This is because permitting the use of mushroom (*A. bisporus*) chitosan as a processing aid was determined to be safe and considered deregulatory in nature, as its use would be voluntary if the draft variation concerned is approved.

However, FSANZ had regard to whether costs that would arise from the proposed measure would outweigh the direct and indirect benefits to the community, government or industry (as per paragraph 29(2)(a) of the FSANZ Act).

The consideration of the costs and benefits in this section were not intended to be an exhaustive, quantitative economic analysis of the proposed measures and, in fact, most of the effects that were considered could not 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 proposed use of mushroom (*A. bisporus*) chitosan as a

processing aid for wine, sparkling wine and fortified wine produced in Australia.

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

Costs and benefits of the proposed measure

The proposed use of mushroom (*A. bisporus*) chitosan is already permitted for:

- beer, cider and other alcoholic beverages produced or sold in Australia and New Zealand
- wine, including sparkling wine and fortified wine, produced in New Zealand
- wine, including sparkling wine and fortified wine, imported into Australia (including from New Zealand).

Industry may benefit from several improvements and efficiencies from the proposed use of mushroom (*A. bisporus*) chitosan as a processing aid for wine, sparkling wine and fortified wine produced in Australia. Due to the voluntary nature of the permission, industry will only use the chitosan as proposed where they believe a net benefit exists for them, either in terms of increasing the quality of their product or reducing production costs.

Given mushroom (*A. bisporus*) chitosan is already permitted in New Zealand for use in wine (including sparkling wine and fortified wine), and for Australian imports, any benefits from approving this draft variation will accrue to Australian wine producers.

If some Australian wine producers experience cost savings by using mushroom (*A. bisporus*) chitosan as a processing aid, cost savings may be passed on to consumers. Consumers might also experience improvements to the quality and taste of Australian-produced wine, sparkling wine and fortified wine, depending on how the substance impacts final products.

Any costs to government from the proposed measure are likely to be small or inconsequential, in terms of the addition of this chitosan to the current range of processing aids that are already monitored for compliance.

Conclusions from costs and benefits assessment

FSANZ's assessment at the call for submissions was that the direct and indirect benefits that would arise from permitting the proposed use of mushroom (*A. bisporus*) chitosan would most likely outweigh any costs. No further information was received during the consultation process that changed that assessment.

2.6.1.2 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.

2.6.1.3 Any relevant New Zealand standards

The proposed amendments are to Standard 4.5.1, which is an Australia-only standard. Mushroom (*A. bisporus*) chitosan is already permitted for use in the production of wine (including sparkling wine and fortified wine) in New Zealand, as well as beer, cider and other alcoholic beverages produced or sold in Australia and New Zealand, under sections 1.3.3—4 and Schedule 16 of the Code.

2.6.1.4 Any other relevant matters

Other relevant matters are considered below.

2.6.2 Subsection 18(1)

FSANZ has also considered the 3 objectives in subsection 18(1) of the FSANZ Act during the assessment.

2.6.2.1 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 chitosan from *A. bisporus*, (see sections 2.2 and 2.3 of this report and SD1).

Mushroom (*A. bisporus*) chitosan is already permitted for use as a food additive and as a processing aid in various foods in accordance with the Code.

2.6.2.2 The provision of adequate information relating to food to enable consumers to make informed choices

Labelling requirements for foods for sale that are manufactured using mushroom (*A. bisporus*) chitosan as a processing aid are discussed in sections 1.3.3 and 2.4.4 of this report.

2.6.2.3 The prevention of misleading or deceptive conduct

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

2.6.3 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 processing aids, nor is there a Codex standard for wine. However, 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 (see section 1.4.1 of this report).

As stated in sections above, mushroom (*A. bisporus*) chitosan is already permitted for use as a processing aid generally (including as a fining and antimicrobial agent), in accordance with the Code, for wine, sparkling wine and fortified wine produced in New Zealand and in other countries where these are imported and sold in Australia. This is the same substance as the

chitosan that is the subject of this application.

The amendment to Standard 4.5.1 in the approved draft variation will provide regulatory certainty for the industry that mushroom (*A. bisporus*) chitosan will also be permitted for use as a fining and antimicrobial agent in wine, sparkling wine and fortified wine produced in Australia.

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

The approved draft variation will better align Australian wine production standards with New Zealand and overseas regulations, providing Australian producers of wine, sparkling wine and fortified wine regulatory certainty regarding the use of mushroom (*A. bisporus*) chitosan as a fining and antimicrobial agent in wine, sparkling wine and fortified wine, with potential for improved quality in these products. This will help foster continued innovation and improvements in food manufacturing techniques and processes.

Ultimately, individual wine makers will make their own commercial decisions on whether the proposed use of mushroom (*A. bisporus*) chitosan as a processing aid will benefit their business.

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

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

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

The Ministerial Policy Guideline *Addition to Food of Substances other than Vitamins and Minerals*⁷ 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 mushroom (*A. bisporus*) chitosan 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.

Attachments

- A. Approved draft variation to the Australia New Zealand Food Standards Code
- B. Explanatory Statement

⁷<https://www.foodregulation.gov.au/resources/publications/policy-guideline-addition-substances-other-vitamins-and-minerals>

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



Food Standards (Application A1306 – Chitosan from mushrooms (*Agaricus bisporus*) for use as a processing aid) Variation

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 Delegate]

[Insert 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 clause 3 of the variation.

1 Name

This instrument is the *Food Standards (Application A1306 – Chitosan from mushrooms (Agaricus bisporus) 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

Standard 4.5.1— Wine Production Requirements (Australia Only)

[1] After subclause 4(4)

Insert:

(5) Mushroom (*Agaricus bisporus*) chitosan may only be used in the production of wine, sparkling wine and fortified wine as a fining and antimicrobial agent.

[2] Table to clause 4

Insert:

Mushroom (*Agaricus bisporus*) chitosan

Attachment B – Explanatory Statement

EXPLANATORY STATEMENT

Food Standards Australia New Zealand Act 1991

Food Standards (Application A1306 – Chitosan from mushrooms (*Agaricus bisporus*) 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 A1306 which sought to amend the Code to permit the use of chitosan extracted from white button mushrooms (*Agaricus bisporus*) as a processing aid in wine, beer, cider, and other alcoholic beverages. The Authority considered the Application in accordance with Division 1 of Part 3 and has approved a draft variation – the *Food Standards (Application A1306 – Chitosan from mushrooms (*Agaricus bisporus*) for use as a processing aid) Variation* (the approved draft 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 approved 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).

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.

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). 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 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 Standard 4.5.1 of the Code (an Australia only standard) to permit the use of mushroom (*A. bisporus*) chitosan as processing aid in the production of wine, sparkling wine and fortified wine in Australia as a fining and antimicrobial agent.

This permission is subject to the condition that the maximum permitted level or amount of mushroom (*A. bisporus*) chitosan 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.

5. Consultation

In accordance with the procedure in Division 1 of Part 3 of the FSANZ Act, the Authority's consideration of Application A1306 included one round of public consultation following an assessment and the preparation of a draft variation and associated assessment summary. FSANZ called for submissions on the draft variation from 16 April – 28 May 2026. 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. It sought to permit the use of a processing aid found to be safe and that use is voluntary. This position is consistent with earlier advice from the Office of Impact Analysis (OIA23-06225)⁸.

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*.

7. Variation

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

Clause 1 of the variation provides that the name of the variation is the *Food Standards (Application A1306 – Chitosan from mushrooms (Agaricus bisporus) 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.

⁸ Regulatory Impact Analysis Guide for Ministers' Meetings and National Standard Setting Bodies | The Office of Impact Analysis (pmc.gov.au).

Schedule to the variation

Items [1] and [2] of the Schedule to the variation amends clause 4 of Standard 4.5.1 of the Code.

Standard 4.5.1 sets out requirements for wine, sparkling wine and fortified wine produced in Australia only.

Clause 4 of this Standard sets out what substances are permitted to be used as processing aids in the production of wine, sparkling wine or fortified wine; and any specific technological purposes associated with those substances.

Item [1] of the Schedule to the variation inserts new subclause 4(5) after subclause 4(4). New subclause 4(5) specifies the technological purpose of mushroom (*A. bisporus*) chitosan i.e. it provides that mushroom (*A. bisporus*) chitosan may only be used in the production of wine, sparkling wine and fortified wine as a fining and antimicrobial agent.

Item [2] of the Schedule to the variation inserts a new entry, in alphabetical order, into the table to clause 4 of Standard 4.5.1.

This table lists substances that are permitted to be used as processing aids in the production of wine, sparkling wine or fortified wine.

The new entry lists the following substance in the table: 'mushroom (*Agaricus bisporus*) chitosan'.

According to subclause 5(8) of Standard 4.5.1, the use of mushroom (*A. bisporus*) chitosan must be consistent with conditions of GMP (as defined by subsection 1.1.2—2(3) of the Code).

The effect of the variation is to permit the use of mushroom (*A. bisporus*) chitosan as a processing aid, as a fining and antimicrobial agent, in the production of wine, sparkling wine and fortified wine in Australia in accordance with the Code.