

Queensland Health

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22 June 2021

Standards Management Officer
Food Standards Australia New Zealand
PO Box 5423
Kingston ACT 2604

Dear Sir / Madam

Submission – Application A1178 – AOAC 2017.16 as a new method of analysis for total dietary fibre

Thank you for the opportunity to provide a submission on the Call for Submissions paper for Proposal A1178.

This submission provides comment on the proposed changes to the *Australia New Zealand Food Standards Code* (the Code). The submission does not represent a Queensland Government position, which will be a matter for the Queensland Government should notification be made by the FSANZ Board to the Australia and New Zealand Ministerial Forum on Food Regulation.

Application A1178 has been prepared to consider permission to permit a new voluntary method of analysis for total dietary fibre (AOAC 2017.16).

Summary

Queensland Health does not support the Application to permit the new voluntary method of analysis for total dietary fibre (AOAC 2017.16) without restriction as such permission creates potential for the public to be misled regarding the total dietary fibre (TDF) content of foods containing substantial amounts of substances not recognized in the Code as sources of dietary fibre (DF); specifically galacto-oligosaccharides (GOS) and isomaltooligosaccharides (IMO). Queensland Health also does not support FSANZ conclusions regarding justifications for unrestricted voluntary permission based on a potential lack of considerable impact on consumer's ability to make informed choices regarding TDF content based on labelling requirements on overseas imported foods containing GOS and/or IMO. Additionally, Queensland Health considers the justifications based on a holistic balancing of other existing methods potential underestimation of DF with potential overestimation using AOAC 2017.16 metrologically invalid. Queensland Health supports Application A1178 risk management option 2: Permit AOAC 2017.16 as a dietary fibre method of analysis with restrictions against its use on foods containing GOS and IMO.

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Please find below additional information and evidence below in relation to this summary. Queensland Health requests FSANZ respond to the issues and concerns raised in this submission, after which Queensland Health may reconsider its position with respect to the risk management option applied to AOAC 2017.16 as a new method of analysis for total dietary fibre.

Response to the call for submission regarding A1178:

Risk management options

FSANZ considered three risk management options during the assessment of Application A1178:

- (1) *Maintain the status quo by not permitting AOAC 2017.16 as a dietary fibre method of analysis;*
- (2) *Permit AOAC 2017.16 as a dietary fibre method of analysis with restrictions against its use on foods containing GOS and IMO; and*
- (3) *Permit AOAC 2017.16 without restriction.*

Queensland Health responses are provided below in plain text below respective bolded FSANZ findings.

FSANZ preferred option 3 based on:

- a. Existing variability in dietary fibre values depending on the method(s) used or where the values are obtained (i.e. food databases).**
- b. Most proportionate response given the advantages of the method for analysing foods containing both high molecular weight dietary fibre (HMWDF) and LMWDF. Manufacturers and analysts should understand what each method is best suited for, including any limitations, and apply them to food samples appropriately.**

Queensland Health does not concur with the justification for unrestricted use of a test method with known determinant overestimation bias, in this case DF based on inclusion of GOS and/or IMO in a respective food under analysis. Rather, risk management option two in which both the existing onus on industry to fully capture the dietary fibre content of a food, manufacturers and/or analysts must select the method(s) of analysis that most align with the dietary fibre composition of the food of interest *based on knowledge of the types of naturally occurring and added dietary fibre sources or ingredients*. FSANZ additionally indicated a food chemistry laboratory advised AOAC 985.29 and 991.43 are most frequently used to measure TDF in foods, often in combination with one or more methods of analysis for low molecular weight dietary fibre (LMWDF). As industry must select the method based on their knowledge of the composition of the product, they should either (a) initially test the product based on methods which allow determination of FOS and IMO content, and if above a defined level, preclude use of ASTM 2017.16, (b) permit use of ASTM 2017.16, but require metrologically-valid correction of TDF values based on pre-determined naturally occurring GOS and/or IMO levels, or (c) preclude use of ASTM 2017.16 in foods containing FOS and/or IMO above a criterion level determined to substantially positively bias TDF determination. Noting levels of GOS in some common foods are not insignificant, e.g. white or wholemeal bread 5.4-6.1% and unnamed pulses potentially 8% or more (wt/wt). Also, addition of FOS and/or GOS as ingredients does not require a specific permission in the Code.

- c. ASTM 2017.16 is a voluntary method enabling industry innovation by measuring total dietary fibre by a single more comprehensive method.**

The voluntary use allows use of existing methods where FOS and/or IMO would lead to potential positive TDF values. ASTM 2017-16 could be used for foods in which GOS and/or IMO are not naturally present (or added) at levels considered to significantly positively bias TDF test results.

d. Enforcement agencies will not be impacted by this permission.

Queensland Health disagrees as enforcement as to *true* compliance with Code definitions of TDF will require testing by jurisdictional laboratories, and potential need to investigate claims related to overestimation of TDF in foods containing substantial amounts of GOS and/or IMO. Noting the DF must still be stated in the nutritional information panel (NIP) regardless of method used to determine TDF.

e. More closely harmonises the analysis of dietary fibre with Codex and comparable countries such as the EU, US and Canada who appear to be embracing newer methods of analysis.

AOAC 2017.16 was referred to the Codex committee for Methods of Analysis and Sampling as a type 1 method to replace AOAC 2009.01, the latter of which is not permitted in the Code. The voluntary permission does not preclude industry from use of existing methods where GOS and/or IMO have been determined present at substantial amounts leading to positive TDF determination bias.

FSANZ did not prefer option 2 based on:

a. The potential overestimate of about 3-6% total dietary fibre for GOS-containing foods measured using AOAC 2017.16 is at least proportionate to the current underestimate of total dietary fibre from the measurement of FOS and total fructans by older, less comprehensive methods in the Code (AOAC 985.29 and 991.43).

Methodological justifications regarding validity of test results based on a “holistic balancing” of results based other existing methods with respect to under-, and over-estimation of DF using AOAC 2017.16 is generally metrologically invalid unless extensive metrological validation of such an approach has been undertaken, and/or all methods in the “median determination pool” are being applied representatively.

b. FSANZ has not identified any reason to treat IMO any differently with relation to AOAC 2017.16.

Queensland Health agrees AOAC 2017.16 appears to have a potential positive determination bias due at least in part to the presence of GOS and/or IMO as the existing permitted ASTM 2001.03. It is again noted that permission for use of ASTM 2017.16 for TDF determination is voluntary, with no existing Code approved methods being withdrawn. Queensland Health also agrees that IMO should be treated similarly to GOS with respect to contribution to potential TDF overestimation and option 2 requirements regarding applicability of ASTM 2017/16 to GOS and/or IMO containing foods.

c. General purpose foods identified by FSANZ as containing added GOS declare GOS as itself in the NIP, rather than dietary fibre.

Queensland Health recognizes this declaration of GOS in the NIP but notes FSANZ considered the use of GOS in special purpose foods (Code 2.9) to be out of scope of Application 1178. These include infant formula (where claims are prohibited), infant foods, toddler milks, sports foods and foods for special medical purposes. Hence, these foods could be subject to overestimation of TDF through addition of GOS.

d. AOAC 2017.16 has advantages for foods containing a mixture of HMWDF and LMWDF - implementing a restriction of the method on such complex food matrices is unrealistic and disproportionate to the level of potential overestimation.

Refer to response to option 3, a-b above.

e. Would adversely impact industry and enforcement agencies as it requires prior knowledge of GOS and IMO content, and methods of analysis used on each food product. It is unlikely consumers would be able to make a more informed choice with this restriction.

Queensland Health agrees consumers would be able to make a more informed choice *with* Option 2 restrictions. Refer to response to option 3, a-b above regarding the expected level of industry knowledge regarding the composition of their products and potential circumstances in which an industry could apply ASTM 2017.16 - subject to restrictions based on their base knowledge of naturally occurring (or added) GOS and/or IMO in foods.

Queensland Health support for risk management option 2

Queensland Health does not support risk management option 3 – accepting ASTM 2017.16 voluntary permission for determination of DF without restriction for the reasons cited above. Queensland Health supports risk management option 2 - permit AOAC 2017.16 as a dietary fibre method of analysis with restrictions against its use on foods containing GOS and/or IMO. This includes food products containing naturally occurring or added synthetic GOS and/or IMO. These include as examples: wheat flour, milk, legumes, and IMO-containing products such as carbonated beverages, sports and energy drinks, soy drinks, milk-based drinks, milk-based and non-milk-based meal replacement drinks, fruit juices, fruit-flavoured drinks, meal replacement bars, breakfast bars and confectionery. Queensland Health recognises if this option were to proceed it would require a regulatory impact assessment and consultation around imposing a similar restriction on the currently permitted method AOAC 2001.03.

As industry is expected to be aware of the composition of their products and select TDF test methods accordingly to most accurately and effectively assess TDF, and Code permitted test methods are available for *initial* determination of both HMWDF and discrimination of LMWDF – including GOS and IMO, there is potential for initial determination of GOS and/or IMO presence/level, and if insignificant according to a defined criterion, use of ASTM 2017.16 permitted via option 2 voluntary permission subject to the condition that the food does not contain GOS and/or IMO above the threshold limit and/or GOS and/or IMO are specifically added as ingredients.

Should you require further information in relation to this matter, please contact Food Safety Standards and Regulation, Health Protection Branch, Department of Health on [REDACTED] or at [REDACTED]

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