



23 June 2021

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Dear Sir/Madam

Attached are the comments that the New Zealand Food & Grocery Council wishes to present on the *Call for submissions – A1178 – AOAC 2017.16 as a new method of analysis for total dietary fibre*.

Yours sincerely

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***Call for submissions – A1178 – AOAC
2017.16 as a new method of analysis for
total dietary fibre***

**Submission by the New Zealand Food & Grocery
Council**

23 June 2021

NEW ZEALAND FOOD & GROCERY COUNCIL

1. The New Zealand Food & Grocery Council (“NZFGC”) welcomes the opportunity to comment on the *Call for submissions – A1178 – AOAC 2017.16 as a new method of analysis for total dietary fibre*.
2. NZFGC represents the major manufacturers and suppliers of food, beverage and grocery products in New Zealand. This sector generates over \$40 billion in the New Zealand domestic retail food, beverage and grocery products market, and over \$34 billion in export revenue from exports to 195 countries – representing 65% of total good and services exports. Food and beverage manufacturing is the largest manufacturing sector in New Zealand, representing 45% of total manufacturing income. Our members directly or indirectly employ more than 493,000 people – one in five of the workforce.

THE APPLICATION

3. The Grains and Legumes Nutrition Council of Australia applied for a new method of analysis for total dietary fibre (the Rapid Integrated Total Dietary Fibre Method (RITDF) AOAC 2017.16) to be added to the methods available in the Australia New Zealand Food Standards Code (the Food Standards Code) under Schedule 11. While a range of methods are permitted, the RITDF method allows for the measurement of total dietary fibre, including galacto-oligosaccharides, polydextrose, fructans and resistant starch in a single method.
4. As part of the process of listing by AOAC, an inter-laboratory evaluation was conducted in 2016 to validate the RITDF method. The method has a range of benefits including improved accuracy of labelling, no over-estimation due to an overlap in methodologies (a more common occurrence at this time), greater accuracy in detecting both native and synthetic fibre analogues, flexibility for analysis of High Molecular Weight Dietary Fibre (HMWDF) and determination of the Low Molecular Weight Soluble Dietary Fibre separately.

COMMENTS

Risk assessment

5. In assessing AOAC 2017.16, FSANZ considered also AOAC 2009.01 because it has been the predecessor method to AOAC 2017.16. AOAC 2009.01 is not permitted in the Food Standards Code but is accepted as a method of analysis for total dietary fibre by Codex and countries comparable to Australia and New Zealand such as Canada, the US and the EU.
6. FSANZ’s assessment found the method AOAC 2017.16:
 - is more comprehensive than older methods in the Code for measuring total dietary fibre
 - has a similar level of precision compared to older methods in the Code for total dietary fibre (AOAC 985.29, 991.43 and 2001.03)
 - has good recovery (mean recovery of 97.4% from 7 samples)
 - avoids the need to account for the double counting of specific dietary fibre fractions if total dietary fibre is measured by two or more methods
 - has an incubation temperature that matches physiological conditions (37°C) and incubation time (4 hr) that, compared with existing methods, aligns closer to conditions for the digestion of dietary fibre in the small intestine

- has substantially increased enzyme levels (compared to AOAC 985.29, 991.43 and 2009.01) so that the resistant starch values are in line with those seen in AOAC 2002.02 and underestimation of fructo-oligosaccharide and overestimation of resistant maltodextrin seen in AOAC 2009.01 are resolved.
7. FSANZ's assessment concluded that galacto-oligosaccharides (GOS) in any form do not meet all criteria for the Code's definition of dietary fibre. By allowing the method to be included, FSANZ was concerned at the potential for over-estimation of total dietary fibre in GOS containing foods.
 8. However, FSANZ supported permitting its use because:
 - at present there is no single method of analysis that can comprehensively measure all low and high molecular weight dietary fibre. AOAC 2017.16 is the most comprehensive method FSANZ has assessed to date
 - AOAC 2017.16, like all methods of analysis, has limitations
 - this is the most proportionate response given the advantages of the method for analysing foods containing both high and low molecular weight dietary fibre
 - the low levels of GOS in the food supply would not considerably alter food composition data, NIPs for dietary fibre or F point scores for the NPSC
 - this is a voluntary method that enables innovation by industry to measure total dietary fibre by a single more comprehensive method
 - the potential overestimate of total dietary fibre from GOS when measured by AOAC 2017.16 is at least proportionate to the current underestimate of total dietary fibre from FOS and total fructans by AOAC 985.29 and 991.43 of about 4g/100g
 - permitting AOAC 2017.16 more closely harmonises the analysis of dietary fibre with Codex and countries comparable to Australia and New Zealand.

Risk management

9. FSANZ did not propose any changes to the current labelling requirements for dietary fibre as a result of the AOAC 2017.16 method being applied.

International uptake

10. AOAC has been recommended to Codex for replacement of the current method in Codex AOAC 2009.01 but it has been recommended the Codex Committee on Methods of Analysis (CCMAS) for adoption at the next Codex Alimentarius Committee (CAC) meeting scheduled for November 2021 (see extract from CCMAS Report May 2021 below).

REP21/MAS - Appendix II

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PART 1

METHODS OF ANALYSIS FOR ADOPTION BY CAC42

(For inclusion in CXS 234 – 1999: changes indicated in **bold** or underlined font)

1.1. CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY USES

Dietary fibre: Applicable to the Guidelines for Use of Nutrition and Health Claims (CXG 23-1997): Table of Conditions for Claims

Commodity	Provision	Method	Principle	TYPE
All Foods (1)	Method applicable for determining the content of dietary fibres of higher and lower molecular weight. The method is applicable in food that may, or may not, contain resistant starches	<u>ICC Standard No.185 / AOAC 2017.16</u> <u>/ AACC 32-60.01</u>	Enzymatic-Gravimetry High Pressure Liquid Chromatography	I

11. Where no method is prescribed for dietary fibre, the US FDA permits the use of an appropriate method for the respective sample. Methods of analysis accepted by Health Canada and the EU are aligned with those accepted by Codex. For total dietary fibre, AOAC 2009.01 is the most recently listed.

Cost benefit

12. There is no doubt that the method has no impact on government or consumers and has a positive impact for industry in that the method could be more efficient to use and possibly more accurate.

Streamlining the process

13. In future, and as with Canada and the EU (and by default the US) there should be a provision for accepting methods of analysis accepted by Codex and included in Codex Standards. While this would have delayed inclusion of AOAC 2017.16 in the Food Standards Code, it would have saved many thousands of dollars in resources to prepare, assess and comment on an application to achieve the same outcome.

Conclusion

14. NZFGC strongly supports inclusion in the Food Standards Code of the AOAC 2017.16 method for calculating dietary fibre as set out in Attachment A.