



19 January 2017

Project Officer Application A1134  
Food Standards Australia New Zealand  
PO Box 10559  
The Terrace  
WELLINGTON 6036

Dear Sir/Madam

**Application A1134 – Increased Concentration of Plant Sterols in Breakfast Cereals – Call for Submissions**

Thank you for the opportunity to comment on this application. The Ministry for Primary Industries (MPI) has the following comments to make.

MPI notes the proposal to retain the current provisions for nutrient profiling of breakfast cereals on the addition of phytosterols. These are that breakfast cereals contain no less than 3g per 50g total dietary fibre and no more than 30g/100g of sugars. MPI propose that in the interests of future-proofing the Food Standards Code, FSANZ consider adopting the Nutrition Profiling Scoring Criteria (NPSC) recently adopted for the addition of Vitamin D to breakfast cereals. We acknowledge that the Vitamin D permission change pertains to the Policy Guideline for fortification with vitamins and minerals, not novel foods. However in the interests of promoting consistency and reducing confusion regarding different criteria for the addition of different components to foods, the adoption of standardised NPSC should be considered in our view.

As noted by FSANZ, the addition of phytosterols to breakfast cereals is unlikely to be done without accompanying nutrition, general level or high level health claims. For health claims, the food is required to meet the NPSC specified in S4—6 anyway.

FSANZ notes that that the proposed approach to allow phytosterols as grams per serving, as opposed to grams per kg food differs from permissions for adding plant sterols to most other foods in the Code, aside from yoghurt. MPI agrees that the proposed approach is sensible for the reasons given, and also because it fits well with other references to plant sterols in the Code, such as the pre-approved general level health claims conditions for this ingredient in S4—5.

The application from Sanitarium Health and Wellbeing specified the addition of a minimum of 0.8g and a maximum of 2g per serving. MPI agree with FSANZ's proposal to increase the maximum level to 2.2g per serve to allow for a slight overage. However we maintain that the minimum should be 0.8g per serving, as per the original application. Due to the significant cost of this ingredient to manufacturers, it is unlikely to be

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added to products in an amount only slightly less than the amount necessary to make a health claim. It therefore seems unnecessary to retain the existing minimum of 0.5g per serving as this is not practical.

MPI notes the risk assessment document "Supporting document 1" which provides detailed and valuable information to address potential concerns. With respect to the nutritional assessment, we note that trials do not appear to be available in pregnant and lactating women, and in young children, which examine the effects of efficacious doses of phytosterols (that is 2-3g per day). MPI acknowledges this as a limitation but considers that current mandatory advisory statements required on food labels about the potential unsuitability of "products containing phytosterols for children under five years and pregnant or lactating women" is sufficient to draw attention to consumers.

With respect to the dietary exposure assessment MPI considers that due to the popularity of Weetbix products in both Australia and New Zealand amongst young children, there may be an occasional risk of accidental consumption of phytosterol enriched Weetbix by young children. However FSANZ outline that occasional ingestion of phytosterols at levels higher than the efficacious dose is unlikely to pose any safety concerns.

Finally, MPI notes that Weetbix and other breakfast cereals are occasionally consumed as ingredients in recipes such as baked products. FSANZ note in their hazard assessment (3.1.1) the potential for the development of plant sterol oxidation products (POPs) in foods and post ingestion. Recently, Lin et al, 2016a showed that heating can increase the rate of oxidation, thereby the formation of these products. In particular frying, which can increase thermal oxidation significantly over microwaving or baking. This said, the highest level achieved (by frying) was 20.5mg POPs per serving, which is approximately one sixth of the NOAEL levels quoted by FSANZ. In addition, a review by Lin et al, 2016b indicated that heating at temperatures between 140-200°C for longer than an hour can markedly increase POP formation. MPI therefore ask if any further data are available from dietary intake studies on the use of breakfast cereals as ingredients in recipes, and whether this would pose any further concerns regarding intake of POPs.



**Manager Food Science and Risk Assessment**

### ***References***

Lin Y, Knol D, Menendez-Carreno M, et al. Formation of Plant Sterol Oxidation Products in Foods during baking and cooking using margarine without and with added plant sterol esters. J Ag and Food Chem, 2016, 64(3): 653-62.

Lin Y, Knol D, Trautwein EA. Phytosterol oxidation products (POP) in foods with added phytosterols and estimation of their daily intake: A literature review. Eur J Lipid Sci Technol. 2016; 118:1423-38.