

NEW ZEALAND BEVERAGE COUNCIL

A1157 Enzymatic production of Rebaudioside M

31 August 2018



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Executive Summary

The New Zealand Beverage Council [NZBC] is the peak body representing the collective interests of the non-alcoholic beverages industry. As the unified voice of the New Zealand beverage industry, the NZBC offers our Members a presence far beyond individual representation in order to promote fairness in the standards, regulations, and policies concerning non-alcoholic beverages.

The non-alcoholic beverage industry requires flexibility and opportunity to innovate in order to provide consumers with an even greater choice of high quality low and no sugar beverages. Reb M has also been shown to be more palatable than some other glycosides.

The New Zealand Council's supports:

1. the inclusion of the new specification for Reb M produced by an enzymatic conversion method;
2. the addition of the enzymes required to allow this manufacturing process in Schedule 18 of the Food Standards Code.

About the New Zealand Beverage Council

Established in 1993, the New Zealand Beverage Council proudly represents the brand owners, manufacturers, bottlers and suppliers of New Zealand's juice, carbonated drinks, flavoured-dairy and bottled water brands.

We are committed to providing our members with a strong and united voice and working to create the conditions that will allow them to prosper.

Our membership is diverse and represents some the largest multinational manufacturers as well as the country's smallest boutique producers as well as those companies that provide a wide range of goods and services to those companies, . Our members represent more than 75 percent of the non-alcoholic ready-to-drink beverages sold at retail level in New Zealand.

A list of NZBC members are attached as Appendix 1.

We strive to advance the industry as a whole, as well as successfully representing the range of beverages produced by our Members. These include carbonated soft drinks, energy drinks, sports and electrolyte drinks, frozen drinks, bottled and packaged waters, juice and fruit drinks, cordials, iced teas, ready-to-drink coffees, flavoured milk products and flavoured plant milks.

The unified voice of the NZBC offers our Members a presence beyond individual representation to promote fairness in the standards, regulations, and policies concerning non-alcoholic beverages. We play a role in educating people on making informed choices encouraging balance, moderation and common sense. Both individual members and the association have been actively promoting on issues such as portion sizes, nutritional labelling, industry marketing and advertising. Our Members listen to consumers and adapt their products accordingly by making positive changes and standing by a commitment to promote greater choice, smaller portions and more products with low or no kilojoules. The Australian Beverages Council & NZBC are an important conduit between the non-alcoholic beverages industry and Government.

Background

It is understood that Food Standards Australia New Zealand [FSANZ] has assessed an application to amend the Australia New Zealand Food Standards Code [FSC] to include a new specification for Rebaudioside M (Reb M) produced by an enzymatic conversion method. FSANZ risk assessment concluded neither the Reb M assessed in the application or the enzymes used in the manufacture of it pose a public health and safety risk.

The New Zealand Beverage Council's Position and Issues for Consideration

The NZBC, advocating on behalf of the non-alcoholic beverages industry in New Zealand would like to indicate our strong support for the addition of Reb M produced through enzymatic conversion to the FSC. We wish to make the following points in relation to the application.

Call to Decrease Sugar in the Food Supply

In Australia and New Zealand, governments, public health bodies, industry representatives and other stakeholders have been proactively working towards addressing the issue of rapidly increasing obesity rates for a number of years. Sugar, alongside various lifestyle choices and a poor dietary profile, have been identified as contributors to obesity. The food and beverage industry recognise its role in reducing the amount of sugar in the Australian diet.

The NZBC and its Members acknowledge the contribution of our industry to the sugar intake in New Zealand. Some of our members who operate in Australia have signed the Australian Beverage Council Ltd (ABCL) Sugar Reduction Pledge¹ which will have a flow on into their activities in New Zealand and the NZBC in discussions with members around the potential of an NZBC Sugar Reduction Pledge.

The NZBC's Members require the flexibility and opportunity to innovate and provide consumers with a greater choice of high quality low and no sugar beverages. In addition to this, our industry must navigate a variety of public health policy initiatives.

We believe that by allowing a variety of methods for the creation of Reb M, industry will be able to continue to innovate to provide a broader range of low and no sugar products.

Favourable Sensory Profile of Reb M

In the supporting document provided by FSANZ it states:

*"minor glycosides, such as Reb M, have more favourable sensory characteristics when compared to the major glycosides (e.g. stevioside, Reb A) and have taste profiles that are more reflective of sucrose."*²

The ability to create products with positive sensory attributes is imperative. Many Members of the NZBC have provided consumer intelligence to suggest that taste profiles are fundamental in a consumer's decision-making process. Although many consumers wish to reduce their sugar intake, they are not willing to compromise on taste. As such, it is important that exceptional low and no sugar taste profiles be offered to the market in order to truly provide

¹Sugar Reduction Pledge - 20% reduction in average sales weighted sugar per 100mL by 2025
<http://www.australianbeverages.org/industry-sugar-pledge/>

²FSANZ (2018). Supporting document 1 risk and technical assessment – application A1157 enzymatic production of Rebaudioside M. pp 6.

consumers with a myriad of healthier low and no sugar alternatives to sugar-sweetened products.

Availability of Reb M and Cost-Effective Methods of Production

Low levels of minor glycosides, such as Reb M, are present in the leaves of *S. rebaudiana Bertoni* and therefore its availability is limited via traditional extraction methods. Given the superior palatability of Reb M and the recent sugar reduction initiatives placed on the beverage industry, the current method of producing Reb M could lead to its scarcity on the market. This could have an influence on the cost of this ingredient and, therefore, limit the products in which it can be contained. Alternative methods could allow for more cost-effective ingredients allowing for the extension of the range of use.

Inclusion of Production Enzymes in Schedule 18

The addition of “*protein engineered enzymes that: contain both UDP-glucosyltransferase (EC 2.4.1.17) and sucrose synthase (EC 2.4.1.13) components; and are sources from Pichia pastoris strain UGT-A, UGT-B1 or UGT-B2*” as a method “*for the conversion of purified stevia leaf extract to produce rebaudioside M*” to Schedule 18 is supported by the NZBC. The recognition of these enzymes as processing aids provides the required clarity to support consistency of enforcement and interpretation over the need to declare the enzymes or not.

Genetically Modified Status of the Ingredient

The NZBC appreciates clarity regarding the genetically modified status of Reb M produced from the enzymatic conversion method referred to in the application. As stated in the call for submissions paper, we note “*the requirement to label as ‘genetically modified’ would not apply to that food for sale*”³.

Extensive Use of Enzymatically Produced Reb M in Overseas Markets

The approval of alternative methods for producing Reb M will allow our industry in Australia to access an ingredient that is currently used overseas. This also has the potential for our industry to be more competitive commercially with markets overseas. We note the following methods for producing Reb M used in:

- a. USA: enzymatic conversion of purified stevia leaf extract;
- b. Canada: genetically modified yeast.

³ FSANZ (2018). Call for submissions – application A1157 enzymatic production of Rebaudioside M. pp 8

Summary

The NZBC thanks FSANZ for the opportunity to provide this submission in support of the inclusion of a new specification for Rebaudioside M produced by an enzymatic conversation method to the Food Standards Code.

We would like to make these concluding remarks in relation to this important application:

- The non-alcoholic beverages industry is currently implementing a range of changes that will decrease its use of sugar. Consumers expect the industry to take sugar reduction measures seriously. Some of our members who operate in Australia have signed the Australian Beverage Council Ltd (ABCL) Sugar Reduction Pledge, which will have a flow on into their activities in New Zealand, and the NZBC are in discussions with members around the potential of an NZBC Sugar Reduction Pledge.
- To meet this, other targets set in sugar reduction and customer expectations, innovation within the category is required with cost effective sugar alternatives.
- As a minor glycoside, Reb M has better sensory attributes than other steviol glycosides, which allows for more palatable products.
- The NZBC supports the draft variation to Schedule 18 - the addition of the enzymes for the conversion of stevia leaf extract to Reb M.
- We appreciate the clarity provided that Reb M manufactured using this method is not considered genetically modified.

Contact

We thank FSANZ for the opportunity to provide this submission in support of the inclusion of a new specification for Rebaudioside M produced by an enzymatic conversation method to the Food Standards Code.

If you wish to discuss any aspects of this submission, please contact Brenda Powell, NZBC Technical Advisory Group via +64 212461261 or info@nzbeveragecouncil.org.nz

Appendix 1: NZBC Member List

A J Park	Nekta Nutrition Ltd
ADM Australia Pty Ltd	New Zealand Artesan Water Ltd (ESTEL)
Antipodes Water Company	NZ Beverages Ltd
Axieo	NZ Quality Waters
Barker's of Geraldine	NZ Sugar Ltd
Brenntag New Zealand Ltd	O-I New Zealand
Coca Cola Amatil NZ Ltd	One Pure International
Coca Cola Oceania	Oravida Waters Ltd
Codemark Limited	Orora Beverage Cans
Cospak NZ Ltd	Otakiri Springs Ltd
Directus International	Pall New Zealand Ltd
Diversey New Zealand Limited	PepsiCo Holdings ANZ Pty Ltd
Drinks Collective a division of Lion	Profuit 2006 Ltd
Ecolab	Pure Bottling Limited
Eden Orchards Ltd	RD2 International Ltd
Frucor Suntory NZ Ltd	Red Bull New Zealand Ltd
Goodpack Australia Pty Ltd	Relax NZ Ltd
Hawkes Bay Water Ltd	Sensient New Zealand
Hawkins Watts Ltd	SOS Hydration NZ Ltd
International Flavours & Fragrances NZ Ltd	Tate & Lyle ANZ Pty Ltd
Invita NZ Ltd	The Better Drinks Co Ltd (Charlies)
IXOM Bronson & Jacobs	The Beverage Boutique
James Crisp NZ Ltd (Ocean Spray)	The Homegrown Juice Co Ltd
Kerry Ingredients NZ Ltd	The Packaging Forum
Kiwifruit Processing Ltd	Zebra International
Labelmakers Ltd	