AUSTRALIAN BEVERAGES COUNCIL

Application A1172 – Enzymatic production of Rebaudioside D

26 March 2019

Australian Beverages

About the Australian Beverages Council Limited

The Australian Beverage Council [ABCL] has been the leading peak body representing the non-alcoholic beverage industry for more than 70 years, and the only dedicated industry representative of its kind in Australia.

The ABCL represents approximately 90 per cent of the non-alcoholic beverage industry's production volume and our Member companies are some of Australia's largest drinks manufacturers. The ABCL also represents many small and medium-sized companies across the country. Collectively, the ABCL's Members contribute more than $7 billion to the Australian economy and they employ over 50,000 people across the nation. The industry also pays $1.2 billion in taxes per annum and for every one direct employee who works in the beverage manufacturing industry, there are 4.9 jobs required elsewhere in the economy to produce and retail beverages.

The ABCL strives 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, 100 per cent juice and fruit drinks, cordials, iced teas, ready-to-drink coffees, flavoured milk products and flavoured plant milks.

The unified voice of the ABCL offers Members a presence beyond individual representation to promote fairness in the standards, regulations, and policies concerning non-alcoholic beverages. The ABCL plays a role in educating consumers on making informed choices which encourage balance, moderation and common sense.

The ABCL advocates on issues such as portion sizes, environmental sustainability, nutritional labelling, responsible industry marketing and advertising, and canteen guidelines, among others. Our Members listen to consumers and adapt their products accordingly by making positive changes and standing by a commitment to promote greater choice, appropriate portions and by developing an ever increasing range of low and no kilojoule products.

The ABCL is an important conduit between the non-alcoholic beverage industry and governments, supporting the Australian Government, State and Territory Governments and Local Councils.

The ABCL introduced a dedicated juice division, Juice Australia [JA] (formerly Fruit Juice Australia), in 2009 and a dedicated water division, the Australasian Bottled Water Institute [ABWI], in 2011. Through these divisions, and various committees, our organisation and Members continue to adapt and flourish.

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Background

The ABCL makes the following submission relating to the assessment of an application by FSANZ to amend Standard 1.3.1 of the Australia New Zealand Food Standards Code (the Code) to a new specification for rebaudioside D (Reb D) produced by a novel method (enzymatic conversion method). Under the current current specifications, the proposed production method is not permitted.

The purpose of the assessment carried out by Food Standard Australia New Zealand [FSANZ] was to determine whether:

- the proposed new production method produces an equivalent product to that obtained by the traditional extraction method from the *Stevia rebaudiana* Bertoni leaf;
- the new Reb D meets the current identity and purity requirements of the steviol glycoside specifications listed in Schedule 3;
- the current acceptable daily intake [ADI] is appropriate for the Reb D produced using this method, by assessing any recent toxicological studies and other data published subsequent to FSANZ's most recent assessment of steviol glycosides.

The Australian Beverages Council's Position and Issues for Consideration

The ABCL, advocating on behalf of the non-alcoholic beverages industry in Australia, would like to indicate its strong support for the addition of the proposed production method for manufacturing Reb D. It is important to consider the following points in relation to the current application.

Current Use of Steviol Glycosides

Reb D has a long history of safe use as a steviol glycoside intense sweetener to create low and no-sugar products with a maximum permitted level in a variety of food categories at GMP. The ABCL supports the inclusion of Reb D produced through this new method as steviol glycoside with an INS number of 960 within the category of currently permitted foods as well as foods that will be approved in the future. The ABCL, at this time, would like to emphasise application (A1149 – Addition of steviol glycosides in fruit drinks) that is currently being considered by FSANZ. A1149 specifically seeks to allow steviol glycosides to be used to sweeten fruit drinks.

Currently Reb D manufactured through this process is permitted in a number of overseas markets. This would allow Australia to become competitive with these markets.

Call to Decrease Sugar in Sugar Sweetened Beverages

In recent years, both Australia and New Zealand have actively been working towards addressing the issue of rapidly increasing obesity rates and associated chronic disease. Sugar in the diet has been highlighted as a major contributor to obesity and chronic disease, and it is therefore incumbent on the regulator to consider safe and suitable alternatives to reduce energy intake derived from sugars.

Government's on both sides of the Tasman are proposing initiatives related to food, nutrition and health for the food industry to implement to improve the diet and health of Australians and New Zealanders.

Past and current Government initiatives that relate to sugar in the food supply include:

a. Labelling Logic: The Review of Food Labelling Law and Policy (2011) (The Blewett Review) provided recommendations to improve food labelling law and policy. Recommendation 12 was to review the ingredient labelling of added sugars;
b. Five-year review of the Health Star Rating system. Sugar has been raised as an issue to consider;
c. Labelling of sugars on packaged foods and drinks consultation which is ongoing and under consideration by the Forum of Food Regulation;
d. The Healthy Food Partnership looks at ways to improve nutrition status of Australians. The Reformulation Working Group recently released a consultation paper with specific targets for beverages to reduce sugar; and
e. The Australian Senate Select Committee Inquiry into the obesity epidemic in Australia.

Many academics, non-government organisations, consumer advocacy groups and public health professionals seek a marked reduction in the sugar content of food and beverages with sugar-sweetened beverages [SSB] as one category of particular note.

There is increasing pressure on the non-alcoholic beverage industry to innovate by:

1. Reformulation;
2. Product and portfolio renovation;
3. Introducing new products into the market; and
4. Making applications to FSANZ to permit important innovation to occur.

One of the core challenges for non-alcoholic beverage manufacturers is to innovate as described without compromising on taste.

The ABCL and its Members recognise the contribution of SSB to sugar intake in Australia.

We have responded to this with the ABCL Sugar Reduction Pledge in which the non-alcoholic beverage industry has committed to a 20 per cent reduction in sugar across the industry's portfolio by 2025. To assist beverage manufacturers to achieve the pledge's goal, we are actively seeking further innovation within the category, such as permitting the use of Reb D as detailed in A1172.

Need for Innovation in Low and No Sugar Non-Alcoholic Beverages

ABCL Members require flexibility and opportunity to innovate and develop new variants. Only through this, will manufacturers be able to provide consumers with greater choice of high quality low and no sugar beverages.

Allowing the non-alcoholic beverage industry to use innovative sweeteners as a replacement for sugar, especially new plant based non-nutritive sweeteners, is vitally important as the industry has responded to consumer calls to reduce sugar in the food supply. This is also important to enable beverage manufacturers to work with public health policy authorities to achieve current initiatives and the industry's ambitious sugar reduction pledge.

Positive Sensory Attributes of Reb D

Reb D has been shown to have more favourable sensory characteristics compared to other major glycosides[1]. This would allow non-alcoholic beverage manufacturers access to more favourable taste profiles which provide sweetness without compromising on taste or significantly increasing the amount of energy in the product.

Support Method of Production

This novel multi-step process uses enzymes uridine 5'-dipohspho-glycosyltransferase [UGT-A] and sucrose synthase. The enzymes are produced by a strain of *Pichia pastoris*. As noted in the call for submissions, this method of production uses the same enzyme processing aid UGT-A as previously assessed and approved under A1157(Reb M) to convert stevia extract into Reb D[2].

FSANZ assessment of this process found it "*meets the purity specification currently listed in the Code for steviol glycosides*" and "*contains no impurities resulting from its unique manufacturing process*"[3]. The ABCL fully supports the use of this method of production for Reb D.

Support Reb D Specification

The ABCL supports the alignment of this Reb D with the current specification with no less than 95% Reb D. This complies with the assay and impurity specifications in the FAO JECFA Monograph 20 for "steviol glycosides from Stevia rebaudioside Bertoni". The

[1] FSANZ. (2019). Call for submissions – Application A1172 Enzyme production of rebaudioside D. 12 February 2019.

[2] FSANZ (2019) Call for submissions – Application A1172 Enzyme production of Rebaudioside D. 12 February 2019. pp 3

[3] FSANZ. (2019). Supporting document 1 Risk and technical assessment – Application A1172 Enzyme production of rebaudioside D. 12 February 2019.

applicant was able to show high purity and no impurities from the proposed manufacturing method.

The ABCL notes that FSANZ assessment found the new method *"produces a high-purity rebaudioside D product and does not present a safety concern and is justified"*[4]

Support ADI for Steviol Glycosides

Previous assessments have confirmed that all steviol glycosides share a common metabolic pathway to steviol which is then glucuronidated and excreted in the urine. Recent opinions support the current ADI of 0 to 4 mg/kg body weight for steviol glycosides. The ABCL supports the continued use of the current ADI.

Support Labelling

The ABCL appreciates clarity regarding the genetically modified status of Reb D 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*[5]. The ABCL supports Reb D produced by this method not requiring 'genetically modified' labelling. It is not derived from an organism that has been modified using gene technology, in contrast to the enzyme processing aid used for its manufacture, which is a food produced using gene technology for Code purposes. The enzyme used as a processing aid in this novel manufacturing method is highly unlikely to be present as an ingredient in a food for sale which contains Reb D.

[4] FSANZ. (2019). Supporting document 1 Risk and technical assessment – Application A1172 Enzyme production of rebaudioside D. 12 February 2019.

[5] FSANZ (2019). Call for submissions – application A1172 Enzymatic production of Rebaudioside D. pp 8

Conclusion

The ABCL, acting on behalf of the non-alcoholic refreshment beverages industry in Australia, **strongly supports** the proposed approach by FSANZ to Application A1172 enzymatic production of Reb D, specifically:

1. Amending Schedule 3 and 18 to allow for the production of Reb D enzymes that contain both UDP-glucosyltransferase and sucrose synthase components and are source from *Pichia pastoris* strain UGT-A;
2. Allowing the same specification, usage and ADI as currently permitted for Reb D;
3. Not requiring Reb D produced by this method to be labelled 'genetically modified'.

The ABCL would like to thank FSANZ for the opportunity to make a submission on Application A1172 enzymatic production of Reb D.

For further information:

To discuss this submission or any aspect contained therein, please contact:

Australian Beverages Council