



Australian Government  
Department of Health

**Fermented beverages –  
Outcomes paper**  
*Food standards*

Australian  
Government  
Department of  
Health

# Contents

Overview and Scope of the Roundtable .....	3
Presentations .....	3
Introduction .....	3
Current Food Standards & Regulation of Health Claims.....	4
Overview and findings of the survey of alcohol content and labelling of fermented soft drinks .....	5
Public Health and Safety - Implications of the survey findings.....	6
Manufacturer’s perspective: Kombucha vs. Kombucha: stratifying quality.....	7
International perspective: Kombucha Brewers International (United States) .....	8
Discussion.....	9
Conclusions .....	10
Next Steps .....	11
Attendees.....	12

## Overview and Scope of the Roundtable

The findings of a nationally coordinated survey to investigate alcohol content and labelling of fermented beverages revealed the presence of undeclared alcohol in a number of these products. This raises public health concerns with potential consumption by pregnant women and underage consumers, drivers/workers requiring a zero blood alcohol reading, and those with specific medical conditions or on medication that may be affected by alcohol. It has also raised regulatory concerns about the potential sale of beverages that are not compliant with the Australia New Zealand Food Standards Code (the Code) and/or the various Liquor Licensing Acts across states and territories.

The objectives of the roundtable were to better understand the current status of the fermented beverages industry; to raise awareness among stakeholders of the findings of the survey and associated public health concerns, and to consider any risk management required to protect public health and safety. Stakeholders include fermented soft drink manufacturers/ producers, major retailers, and regulation and enforcement agents.

## Presentations

A series of presentations from government representatives and industry members helped participants understand the current regulatory environment and some of the emerging issues to be addressed.

### Introduction

#### *Australian Government Department of Health*

Participants were provided with an overview of the fermented beverages industry in Australia as well as an introduction to the aims and objectives of the Roundtable.

It was noted that the fermented beverage market in Australia has grown significantly in recent years. Kombucha has seen the largest growth, with sales rising 174 per cent over the last three years, and data suggests that the biggest consumers of fermented beverages are in New South Wales, closely followed by Queensland. It is understood that fermented beverages undergo a primary fermentation step, traditionally followed by a secondary fermentation occurring after bottling (also known as bottle fermentation or conditioning).

Alcohol can be produced at both fermentation stages, and we are aware that some businesses choose to use carbonation as an alternative to bottle fermentation to reduce alcohol production. However, manufacturers that do not adequately control the fermentation processes may have alcohol produced even if carbonation is used as an alternative to secondary fermentation.

Participants were reminded that all fermented beverages should be produced and adhere to the relevant regulations in the Australia New Zealand Food Standards Code, and depending on the alcohol content of the products, State and Territory Liquor Licensing Acts.

## Current Food Standards & Regulation of Health Claims

### *Food Standards Australia New Zealand*

Food Standards Australia New Zealand (FSANZ) is an Australian statutory agency within the Australian Government Health portfolio whose main function is to develop and administer the Australia New Zealand Food Standards Code (the Code). FSANZ does not have responsibility for enforcement of the Code. Enforcement is the responsibility of state and territory jurisdictions.

An overview of the relevant regulations within the Code for manufacturers of fermented beverages was provided to stakeholders. These include generic labelling requirements, (such as name and address of supplier, name of the food, statement of ingredients and date marketing, and nutrition information) and other labelling requirements associated with both non-alcoholic and alcoholic beverages.

**Non-alcoholic beverages and brewed soft drinks** (defined as "...a food that: (a) is the product prepared by a fermentation process from water and sugar, and one or more of (i) fruit extractives or infusions; or (ii) vegetable extractives or infusions; and (b) contains no more than 1.15% alcohol by volume" are "not be labelled or otherwise presented for sale in a form which expressly or by implication suggests that the product is an alcoholic beverage" (Standard 2.6.2);

There are also standards for **foods containing alcohol** to ensure that "food containing alcohol must not be represented in a way which expressly or by implication suggests its non-alcoholic." (Standard 2.7.1).

For **alcoholic beverages or foods**, Standard 2.7.1 requires a statement of alcohol content for "(a) a food (including an alcoholic beverage) that contains more than 1.15% alcohol by volume; or (b) an alcoholic beverage that contains 1.15% or less alcohol by volume; or (c) a beverage that contains not less than 0.5% but not more than 1.15% alcohol by volume."

### ***Nutrition content, health and related claims***

Standard 1.2.7 - *Nutrition, health and related claims* of the Code, provides guidance on the various types of health claims and under what circumstances the various regulations apply. Of note, nutrition content or health claims are not permitted on beverages containing more than 1.15% alcohol by volume. Participants were also reminded that therapeutic claims (referring to the prevention/diagnosis/cure/alleviation of a disease, disorder or condition) are not permitted on foods.

Nutrition content claims require certain criteria are met in order to justify the claimed benefit. General level health claims must be based on scientifically substantiated food health relationships, and high level health claims must be founded on preapproved relationships such as 'low in saturated fatty acids and reduced blood cholesterol'.

A reference document titled “Getting Your Claims Right” has been developed to assist with labelling in relation to health claims. This resource can be accessed on the FSANZ website at: <http://www.foodstandards.govt.nz/publications/Pages/gettingyourclaimsright.aspx>

Participants were also advised on how to propose amendments to the Code. There are certain criteria to be met by applicants who wish to amend the Code, and details can be found on the FSANZ website ([www.foodstandards.govt.nz](http://www.foodstandards.govt.nz)).

## Overview and findings of the survey of alcohol content and labelling of fermented soft drinks

### *Department of Health and Human Services, Victoria*

The presentation provided participants with an overview of the survey findings completed during 2017 and 2018, particularly drawing attention to the levels of non-compliance with current regulations as stipulated by the Australia New Zealand Food Standards Code (the Code).

The survey involved the sampling of fermented beverage products across five Australian jurisdictions (Victoria, Queensland, New South Wales, Tasmania, and South Australia). It found that a significant number of products did not comply with relevant regulations in the Code. As a breakdown, the findings revealed:

- 44.8% of brewed soft drinks sampled, had an alcohol content of less than (<) 0.5% ABV (alcohol by volume).
- 32.8% had an alcohol content of greater than or equal to 0.5% to less than or equal to 1.15% ABV;
- A further 20.8% had an alcohol content greater than or equal to 1.15% ABV with no labelling (therefore non-compliant);
- Another 1.6% had an alcohol content of greater than or equal to 0.5% to 1.15% ABV with labelling;

These results raise a number of public health and safety concerns, particularly for population groups who do not wish to consume alcohol for health reasons or otherwise.

The survey also highlighted that:

- products that underwent secondary fermentation to make the product effervescent were more likely to have an increase in alcohol content through the supply chain than drinks that underwent carbonation
- product that included untreated flavourings (such as fresh herbs) or additional sugars (such as syrups or cordials) were more likely to have an increase in alcohol content through the supply chain than drinks that contained treated flavourings).

The majority of jurisdictions, under their Liquor Acts, define liquor as being a beverage that contains more than 1.15% ethanol by volume. However, in Queensland, Tasmania and Victoria, beverages containing more than 0.5% alcohol by volume are considered alcoholic (or a liquor). The need for producers to be familiar with the various Liquor Acts where their products are sold, was therefore emphasised.

## Public Health and Safety - Implications of the survey findings

### *NSW Food Authority*

The New South Wales Food Authority (Food Authority) is the state's food enforcement agency with responsibility to interpret and enforce the Code and the NSW Food Act. The Food Authority also has an educational role, a science function for evidence based decisions, and contributes to food standards implementation and development.

The presentation provided an overview of the fermented beverages industry in NSW as well as the implications of the survey findings. There are at least 37 producers in NSW, mostly in the Sydney region and Byron Bay. There have been 4 recalls and 1 withdrawal of a fermented beverage product since 2010 due to the omission of alcohol labelling. NSW undertook testing of 94 products; 67% kombucha; 12% kefir (water); 8% kefir (dairy) and 13% 'other' (ginger beer, tonic and kvass).

The results showed that:

- 64% of products contained greater than 0.5% ABV;
- 25% contained greater than 1.15% ABV;
- 15% of those containing alcohol, contained no alcohol warning.

The range of alcohol content for the study was up to 5.3%.

In addition, products generally carried multiple nutrition content claims (e.g. gluten/fat/lactose free and low calorie/carb/GI) which are not permitted on products with greater than 1.15% ABV. Health claims which focused on probiotics with gut health, vitamin B (kidney function, live, nervous system, skin disorders, immunity) are also not permitted where greater than 1.15% alcohol is present.

There are a number of risks associated with undeclared/inaccurate declaration of alcohol including risks to;

1. consumers - such as pregnant women; people using prescription medicine where alcohol may interfere; drivers (including probationary drivers) and workers requiring a zero blood alcohol reading; children and youth under the legal drinking age; and those living in dry communities;
2. regulators - responsible for those non-compliant products in the marketplace;
3. industry - reputational risks (from complaints/issues) financial (eg recalls, restricted access to overseas markets; fines; court costs); and run the risk of enforcement action from food/consumer regulators (negative publicity).

There are liquor licensing regulation considerations too.

Labelling breaches of the Code result in consumers being unable to make informed decisions on their food purchases, due to the presence of prohibited/non-permitted nutrition content or health claims; inadequate nutrition information and potential for false or misleading statements.

In response to the survey results, the Food Authority opted for the 'education' enforcement tool, primarily; manufacturing processes to control fermentation (Standard 3.2.2 cl.7 - practicable measure to process only safe and suitable food); and labelling compliance (Standard 1.2.1 or 2.7.1). The outcomes included inspections to review practices, the issuing of 11 written warnings, and plans for a food safety information session in Byron Bay, to include kombucha labelling as a discussion piece.

The Food Authority would welcome the opportunity to learn from manufacturers/producers; to raise awareness of the risks posed by inadequate labelling; discuss the merit of a definition/compositional standard for 'kombucha'; for regulators to agree on a consistent approach on interpretation; and to participate in the development of a national guideline on the safe manufacturing of kombucha and similar products, including appropriate alcohol testing (based on the Victorian guidelines).

### Manufacturer's perspective: Kombucha vs. Kombucha: stratifying quality *Kommunity Brew*

A representative of Kommunity Brew provided stakeholders an overview of some of the key issues for producers of fermented beverages and some proposals for how to mitigate risks of non-compliance to protect health and safety of the consumer and the future of the industry.

#### ***Small Scale High Risk***

The cottage size industry and true traditional brewing, can have the advantage of being relatively easy to commence. It currently requires a local council assessment (can be a low to high risk business assessment) and a standard business registration. This type of production presents a high risk due to the potential lack of quality controls and labelling compliance.

#### *What should be required?*

- A high risk food business assessment
- A reviewed Hazard Analysis Critical Control Point (HACCP) plan or certification
- Membership of a government body.
- Reinheitsgebot 'Belgian Purity Laws' or Australian Wine Research Institute (AWRI) or Australian KBI standards.
- Because we tread the line of alcohol production and food production though not truly either.

#### *What does a producer need to control?*

Critical Control Points are:

- Microbial / culture contamination or mutation
- Foreign objects
- Hyperacidity
- Hyperalkalinity
- Alcohol

#### ***Large Scale Low Risk***

A larger scale production may include the option of pasteurisation, addition of pH regulator, sweetener, flavour and water. The benefits of this approach are that it is low risk, the Quality Assessment and Quality Controls are mid-range; there is a zero-sugar option, high profits and near-infinite yield. The challenges are in terms of the 'definition' of kombucha and whether the final product can carry this name. It may mislead consumers.

*What is required for this business to function?*

- Certification under the Food Safety Management System Scheme (FSSC 22000)
- HACCP certification
- Local registration.

The challenges associated with this approach are largely associated with whether the final product remains 'kombucha'. There is a challenge for producers to control alcohol content and safety risks, without compromising the product quality and value.

***If Kombucha is aggressively regulated, what changes could take place?***

- All alcoholic kombucha will be below 0.5%ABV and will be diluted
- All businesses require HACCP certification and are considered high-risk.
- All consumers would get a low cost, low value commodity.
- Australian creative beverages could be left behind.
- The soft-drink/carbonated beverage space would expand.
- The potential health benefits to fermented beverages specifically kombucha and water kefir could be left unfound.
- Risk is largely mitigated for the category.
- The ACCC could hold producers of fermented beverages to Account.

### **Proposal for a Fermented Beverage License**

*For Producers of Non-Alcoholic Fermented Beverages*

- Non-Alcoholic moves to an Australian standard of <1.15% nationally.
- Beverages traditional or otherwise, that naturally create alcohol, but not sold as alcoholic beverages.
- Beverages must not exceed X% (1.15%).
- Beverages are not subject to excise or liquor licensing.
- Businesses are required to register as a high risk food business to local councils.
- A HACCP Food Safety Plan or FSSC22000 (or equivalent) is required for a license.
- Water Kefir, Jun, Kvass, Kefir, Switchel, Apple Cider Vinegar, Fruit Vinegars containing yeast, kombucha, microbiologically active beverages.

### **International perspective: Kombucha Brewers International (United States)**

#### ***Kombucha Brewer's International***

Kombucha Brewers International (KBI) is a trade association founded in 2014 with an initial 40 founding companies, and together has around 300 brewery members. The association is based in the United States. A number of Australian producers are also members of KBI.

An insight into the composition of kombucha and an overview of the history of the kombucha industry was presented, as well as some of the action being undertaken by KBI with a view to changing legislation to protect the future viability of the kombucha industry.



## History of the Commercial Kombucha Industry

It is understood that sales of kombucha commenced in 1995. In the early 2000s there was a steady growth with new brands being introduced, however in 2010 there was a voluntary withdrawal of kombucha that was thought to have an alcohol content of >0.5% ABV. There was no testing method for ethanol in kombucha, and many false positives. Since 2010 however, there has been consistent growth in the industry.

Some of the key challenges identified by members of KBI are identified as:

- Legal/regulatory challenges
- Production/process efficiency/quality control
- Distribution and expansion
- Financing and capitalisation
- Accounting and cost control
- Marketing and promotions

### ***Establishing testing methods for Kombucha***

In 2015, KBI held a meeting with the Tax and Trade Bureau in the US, and initiated an AOAC (Association of Official Analytical Chemists) Working group on ethanol testing for Kombucha, to determine the best approach.

Since 2016-present, the KBI have been lobbying for the implementation of The KOMBUCHA (Keeping Our Manufacturers from Being Unfairly taxed while Championing Health) Act. This is to demand an update to the Internal Revenue Code that exempts kombucha from the excise taxes intended for beer. The demand is for increases to the allowable ABV for kombucha only, from 0.5% to 1.25% before taxation occurs.

In 2019, KBI has met with officials in New Zealand to discuss establishing ethanol testing methods for Kombucha, and discussed the potential to collaborate with Australia via FSANZ. The association hopes for a harmonisation of all Australian States and Territories, to permit alcohol levels of up to 1.15%ABV; to establish a testing standard for ethanol in kombucha via FSANZ, and to galvanise a KBI Australia/New Zealand Committee.

## Discussion

A summary of some of the key concerns and points of interest raised by attendees of the roundtable is provided below.

### *Raised by Producers/Manufacturers:*

- There is a level of ambiguity within the Code in relation to fermented beverages, particularly in relation to the absence of some definitions and misunderstanding around health claims. Definitions of an 'alcoholic beverage' and a 'beverage' do not currently exist in the Code, and there was a high level of interest in amending the Code to include these definitions. Stakeholders were guided to sources of information on health claims, and also on the process involved in submitting an application to amend the Australia New Zealand Food Standards Code. Several producers also resolved to continue discussions on the issue of definitions at the conclusion of the roundtable.

- The accuracy of testing and quality of the analytics for detecting low level alcohol levels in fermented products was raised as a concern. It was suggested that producers could raise such concerns with the National Association of Testing Authorities (NATA).
- The current inconsistency across State and Territory Liquor Licensing Acts in relation to permitted levels of alcohol in fermented beverages was considered an obstacle for producers. Producers were reminded that familiarity with the legislation applicable to the state/territory in which their products are sold is required to ensure compliance.

*Raised by Regulators:*

- The public health and safety risks of alcohol being detected in 'non-alcoholic' beverages is the priority concern of governments and regulators.
- The fermented beverages industry 'straddles' the food and the alcohol industries. Producers need to determine if their products meet the definition of an alcoholic beverage<sup>1</sup>, or meet the definition of a food, and ensure compliance with the most appropriate regulations.
- There are challenges associated with a largely informal production environment. There is inconsistency in the level of quality assurance and quality controls being applied across the fermented beverages brewing environment, which can pose further risks to public health and safety.

## Conclusions

- Producers must know the level of alcohol that is contained in their products and comply with relevant legislation and standards from production through to retail.
- If producers want their product to be regulated as a food, there are a number of standards and requirements to be met, as outlined in the Australia New Zealand Food Standards Code.
- If beverages do contain alcohol in excess of 0.5 or 1.15% ABV (depending on the jurisdiction), they need to be regulated as an alcoholic beverage, and licensing requirements will apply.
- Producers should also be aware that the fermented beverages industry is not being targeted by regulators. The interests of regulators is to ensure products are correctly labelled, marketed and sold in accordance with their contents in the interests of health and safety.
- Producers need to be mindful of the product handling throughout the process - from manufacture, transport and storage to retail, and the regulations that apply at each stage. Producers are responsible for the product handling throughout the supply chain.

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<sup>1</sup> **Note:** Definition of liquor varies across state and territory liquor licencing acts.

## Next Steps

- The Commonwealth Department of Health will follow-up with emails to participants emphasising the need for products to be appropriately regulated.
- Jurisdictions will continue to monitor products in the market place and take action as necessary.
- Industry members, State and Territory governments and regulators will be advised of the roundtable discussions and outcomes.
- Industry members will take the necessary steps to ensure the protection of public health and safety.
- The Commonwealth Department of Health will convene a teleconference for those unable to attend this meeting to advise on the outcome of the roundtable.

## Attendees

Invited stakeholders included fermented soft drink manufacturers/producers, major retailers, and regulation and enforcement agents. A list of those represented is provided below.

<b>Producers/Manufacturers</b>	
Beverage Technologies Bod Kombucha Buchi Kombucha Coca-Cola Company Gather Brewing Grateful Harvest Herbs of Life Kommunity Brew Liberty Kombucha Mojo Beverages	Nourishme Organics Remedy Drinks ROK (Raw Organic Kombucha) Soulfresh Group Tonicka Kombucha Wholefood family Wild Kombucha The Bucha of Byron The Fermentary The Good Brew Company
<b>Peak Bodies</b>	
Australian Beverages Council Kombucha Brewers International	
<b>Government Representatives</b>	
Australian Government Department of Health Food Standards Australia New Zealand (FSANZ) ACT Health Agriculture Victoria Department of Health and Human Services Victoria Department of Health and Human Services Victoria	NSW Department of Primary Industries New Zealand Ministry for Primary Industries Victorian Commission for Gambling and Liquor Regulation WA Health