



Food Safety Assessment of Kombucha Tea Recipe and Food Safety Plan

Request received from:	Regional Health Authority
Date of request:	January 27, 2015. Updated March 9, 2020.
Issue (<i>brief description</i>):	Assessment of kombucha tea recipe and food safety plan

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Summary of search information:

1. Internet sources: general search for “kombucha”
2. OVID and PubMed search “kombucha” AND “illness”
3. Personal communication with federal and provincial agencies

Background information:

Kombucha Tea (*KT*, sometimes called Manchurian tea or Kargasok tea) is a slightly sweet, mildly acidic tea beverage consumed worldwide, which has seen significant sales growth in North American markets from recent years.¹ *KT* is prepared by fermenting sweetened black or green tea preparations with a symbiotic culture of bacteria and yeast (*SCOBY*), often referred to as the “mushroom” (misnamed because of its appearance) or as a “mother” (for its ability to reproduce). The floating mat is a biofilm layer made up of bacteria and cellulose that is more correctly referred to as a pellicle. The culture comes in different varieties, but is generally made up of a variable amount of *Gluconacetobacter*, *Lactobacillus*, and *Acetobacter* (genera of [acetic acid bacteria](#)) coupled with one or more yeasts, which can include *Saccharomyces*, *Saccharomycodes*, *Schizosaccharomyces*, *Zygosaccharomyces*, *Brettanomyces*, *Candida*, *Torulospora*, *Koleckera*, *Pichia*, *Mycotorula*, and *Mycoderma*.² Alcohol produced by the yeasts is further transformed into acetic acid by the bacteria, giving it its acidic composition while limiting the tea’s alcoholic content.³

Potential health benefits of *KT* consumption, said to alleviate a non-specific range of ailments, have recently generated an increased interest in the product.⁴ These benefits are largely based on anecdotal reports, and studies on the claimed antimicrobial (primarily from acetic acid), antioxidant, hepatoprotective, and anticancer effects have only been conducted *in vitro*.⁵ There has been no evidence published to date on the biological activities of kombucha in human clinical trials.⁶ Furthermore, *KT* consumption has proven to be harmful in several documented instances.⁷⁻⁹ However, since the scope of attributed health risks are yet to be fully established, some sources⁶ advise against drinking *KT* for pregnant or nursing women, as well as children under the age of 4.

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In 2015, Vancouver Coastal Health requested review of a recipe and a food safety plan associated with the commercial production of KT intended to be sold and distributed in large volume (20 L) kegs (carboys). In 2019, following a study of ethanol content in kombucha products conducted by BCCDC this food issue note was updated to include general concerns with alcohol in kombucha.

General KT Process Summary

Prior to the fermentation step, black or green tea leaves (or bagged) is added to hot, boiled water. Sugar (sucrose) may be added at this point or after the tea leaves are removed. The tea is steeped for several minutes (length of time depends on desired final flavour). The tea leaves are subsequently removed and the now hot, sweetened tea is allowed to cool to room temperature. Once cooled, a *SCOBY* and a portion of a previous batch of *KT* (generally 10%) are added to the cooled tea. A commercially purchased culture and starter *KT* can be used on the first batch, but general practice is to re-use *SCOBYs* and a portion of a previous batch of *KT* on subsequent batches.

The tea's pH at the beginning of the fermentation process is generally ≤ 5 . During the fermentation process, the yeasts in the mixture metabolize sucrose into glucose and fructose, then into ethanol and carbon dioxide. Ethanol is then oxidized by the bacteria (in the presence of air) to acetaldehyde, then to acetic acid. Typically, the alcohol and acetic acid content of *KT* are both less than 1%, but each can rise to 3% during a long fermentation (~ 30 days).¹⁰ Other studies have demonstrated alcohol (i.e. ethanol) after a 10-day fermentation period, the final product can be variable in residual alcohol, sugars, tea components and bacterial and fungal metabolites.¹¹ The acetic acid bacteria also utilize glucose to produce gluconic acid to approximately 2%. Fructose is used to a lesser extent, and some remains after the fermentation. Some glucose will also remain unmetabolized, and, together with the remaining fructose, provide sweetness. The entire fermentation step (approximately 7 days, though this can vary significantly) results in a finished pH of ≥ 2.5 . At this point, the *KT* should be refrigerated or pasteurized to stop additional alcohol and acid production prior to consumption or packaging.¹²

What are the risks and potential hazards associated with the commercial production of kombucha tea?

Kombucha is a low risk product due to its acidic composition. However, excess acid and alcohol may pose public health risk to certain population groups. When kombucha is sold in a raw (unpasteurized) form the live microbes may continue to ferment creating product risk. This may occur at the point of processing or with consumer mishandling when product is left unrefrigerated. Acidosis from excess acid can occur in persons with underlying medical conditions, in particular metabolic issues such as diabetes. Ethanol values in excess of 0.5% can also be of concern to toddlers and infants, and no alcohol is recommended during pregnancy. Other groups may also wish to avoid all alcohol if they are on prescription medications, if they are recovering from alcohol addiction issues, for occupational or religious reasons. There is evidence to suggest that ingesting low amounts of alcohol, even one drink per day, may increase your lifetime cancer risk.¹³

Hazards most likely to be associated with *KT* include:

Biological:

Pathogenic microorganisms can contaminate the *KT* just after the water boiling step, and throughout the entire subsequent process. However, the period of greatest vulnerability, from a food safety

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viewpoint, is after the tea has cooled, until a pH of ≤ 4.2 has been achieved by fermentation. Until this pH is reached, contamination by pathogens would potentially be exacerbated by outgrowth of the contaminants. Reported symptoms of possibly contaminated *KT* consumption include dizziness, nausea, vomiting, headache, and jaundice.⁶ There has even been a case of unhygienic *KT* exposure that led to cutaneous anthrax.¹⁴ Mold contamination on *SCOBY* cultures, predominantly with *Penicillium*¹⁰ or *Aspergillus*⁸ organisms, is also seen in homemade instances of *KT* brewing. Although not yet reported in a *KT* setting, some toxin-producing *Aspergillus* species could be of concern, especially for immunocompromised individuals¹⁵, because of their known toxigenic and carcinogenic effects.¹⁶ **However, traditional foodborne pathogens are not likely to occur in kombucha because the pH is acidic (normally at a pH of <3).**¹⁷ *E. coli* would die off under these conditions.

Chemical:

Acidosis (low pH). The other potential hazard begins from the end of fermentation through to consumption. Unless the production of acid is controlled, over-fermentation can result in excessive acetic acid production. The resulting low pH environment has the potential to leach out some of the chemical contaminants that may be present in the fermentation vessel and packaging materials. For example, cases of lead poisoning were observed with *KT* brewed or stored in glazed earthenware.²

On a similar note, over-consumption of *KT* increases the likelihood of acidosis. *KT* consumption has proven to be harmful in a few documented instances.⁹ Some reports suggest exercising caution if regularly drinking *KT* while taking medical drugs or [hormone replacement therapy](#), in part because of the reduced absorption rates of drugs that are sensitive to stomach pH levels.¹⁸ The possibility of toxic effects when *KT* is consumed in large quantities also became a concern with the report of two incidents occurring in 1995.⁸ One individual, who died of cardiac arrest, was found to have perforations of the intestinal tract and severe acidosis. It was speculated that *KT* might have been the cause of death, since she had consumed 4 oz per day of homemade *KT* for two months prior to the incident. The surviving victim, whose *KT* came from the same initial *SCOBY*, also suffered cardiac arrest and severe acidosis. She mentioned that she increased her daily consumption from 4 oz to 12 oz and the fermentation time length from 7 days to 14 days, and that she consequently could hardly manage swallowing the very acidic tea, but did so anyway. It was later determined that the individuals had pre-existing conditions that made them susceptible to acidosis. These two cases of illness were investigated to determine if *KT* played a role in the development of metabolic acidosis or other toxic effects.

Alcohol (ethanol). The fermentation process of kombucha is similar to the fermentation process of apple cider vinegar. The sucrose in the sweetened tea is broken down by yeasts and bacteria into alcohol. Under oxygenated (aerobic) conditions acetic acid bacteria and other bacteria further break down the alcohol into acetic acid (vinegar). There are many other reactions going on including specialized bacteria that make the floating pellicle (cellulose, mushroom or *SCOBY*) layer. The pathway, pellicle and associated bacteria can be visualized in Figures 1 and 2. Alcohol is measured in liquids by percent volume, with the abbreviation of ABV or alcohol by volume (ABV). In BC, liquor is defined as a beverage that contains greater than 1% ABV.

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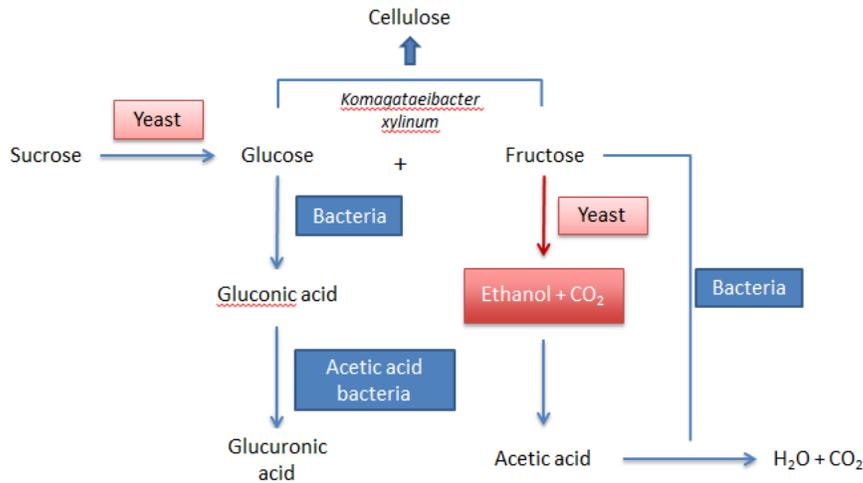


Figure 1. Metabolic pathway for kombucha (adapted from Villarreal-Soto et al, 2018).¹⁹

In Figure 2 a SCOBY mat is shown growing in the fermenting tea (left in box E, photo by Adam DeTour), yeasts and bacteria are shown separating from the mat (right in box F, photo by Benjamin Wolfe, 2015).²⁰

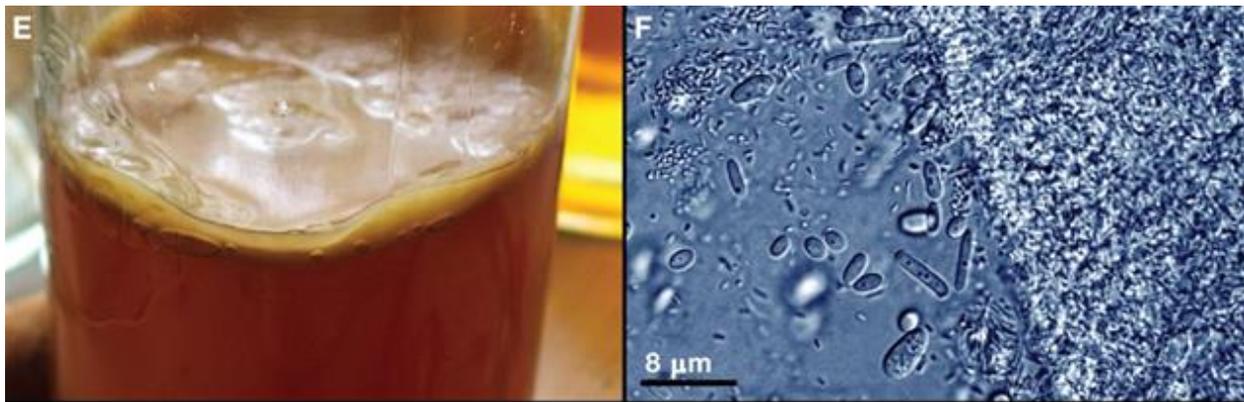


Figure 2. Photos of bacteria and yeast present sloughing off of a kombucha pellicle (adapted from Wolfe, 2015).²⁰

Previous guidance on kombucha from British Columbia and elsewhere:

Previous guidance on kombucha from BC was provided in the first edition of this food issue note.

In Canada, federal authorities state: “that there is no concern about the alcohol content in kombucha as long as it does not exceed 0.5% (ethanol exposure would be similar to that from the consumption of a typical meal from things like bread, fruit juice, etc). For products ≥ 0.5% ABV, Health Canada supports the guidance from the [Public Health Agency of Canada \(PHAC\)](#), which states that there is no safe amount or safe time to drink alcohol during pregnancy or when planning a pregnancy, and that youth should delay drinking alcohol as long as possible, at least until reaching the legal drinking age.”²¹

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Alcohol and labelling requirements: Alcohol labelling in Canada is required when product exceed 1.1% ABV²², in BC when products exceed 1.0% ABV²³, however there is no labelling requirement for products below these values. Other jurisdictions have examined kombucha labelling requirements for alcohol. In the United States, kombucha with alcohol greater than 0.5% ABV is regulated as an alcohol beverage under the Tax and Trade Bureau (TTB).²⁴ If the alcohol content increases to beyond 0.5% at any time during the fermentation or after bottling the TTB considers this an alcohol beverage and the producer is subject to oversight as a brewer. If greater than 0.5% ABV occurs unintentionally they recommend the producer to either:

- “Take corrective steps, such as adopting a manufacturing method to ensure that fermentation does not continue after bottling; or
- Qualify with TTB as a producer of alcohol beverages.”

They recommend producers use an approved alcohol testing method. Kombucha with an ABV that is >0.5% is also required to bear a health warning statement.

Food Standards Australia New Zealand published a survey of fermented soft drinks in 2019. They found 35% of products with an alcohol content of less than 0.5% ABV.²⁵ Overall, 23% of products exceeded their regulated amount of alcohol at >1.15% ABV.²⁵ Their messages to manufacturers were that it was their responsibility to meet requirements, and all fermented beverages must include alcohol content statements of “contains no more than X% alcohol by volume.”²⁵

Control of Potential Hazards at Various Steps in the Process ¹²

Biological Hazards

Hygiene and sanitation: Contamination by other microorganisms, and subsequent outgrowth during the fermentation period, are potential risks. Clean and sanitized utensils and vessels should be used throughout the process. Moreover, the preparation and fermentation areas should also be clean and sanitary. The fermentation vessel should be covered with a clean and sanitized porous cloth (e.g., cheese cloth).

Cooling of heated tea: The initial tea infusion starts at pH ~ 5. As such, after cooling to 60°C and before fermentation, the tea is vulnerable to outgrowth by potential contaminants. As such, the tea should be cooled from 60°C to 20°C within 2 hours, at which point the *SCOBY* should be added as soon as possible so as to begin the fermentation step and subsequent acid production.

Packaging of KT: *KT* can be packaged after it is fermented, if the finished product has a pH ≤ 4.2. However, if not controlled, a potential effect of packaging can be the persistent production of alcohol. Some US commercial processors of bottled *KT* were forced to recall unpasteurized *KT* from grocery store shelves when the alcohol content exceeded 0.5% for legislative reasons. Some bottled brands continued to ferment, and produced up to 3% alcohol in the package.¹² This can happen because yeast continues to ferment sugars, producing alcohol and carbon dioxide. In a sealed container (i.e. bottled *KT*), the build-up of carbon dioxide inhibits the conversion of alcohol to acetic acid, therefore acid hazard is unusual at that point. However, carbon dioxide formation may in extreme cases lead to excess pressure and the leakage of bottles.

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Options to prevent over-production of alcohol and carbon dioxide after packaging include:

- Pasteurizing the finished *KT*. This pasteurized and subsequently bottled *KT* would be considered shelf stable at room temperature.
- Adding 0.1% sodium benzoate and 0.1% potassium sorbate to the finished *KT*, and refrigerating until use. Benzoate and sorbate will prevent mold growth and minimize yeast and acetic acid bacteria growth in the sealed container.
- Using refrigeration alone to minimize hazards and spoilage.

With the last two options, a refrigerated shelf life will need to be determined based on eventual yeast growth. If this technique proves difficult, the processor may need to find a commercial *KT* culture with yeasts selected to not grow well at refrigeration temperature.

Adequate cleaning and sanitation of packaging containers: If using returned bottles, assume that the returned bottles are contaminated. If this is adequately managed, then subsequent refrigerated retail storage of the bottled *KT* would be low risk provided the pH is ≤ 4.2 .

Knowing when the *SCOBY* may be contaminated: Discard all *KT* produced that

- show signs of mold contamination (fuzzy concentric patches that can be colored green, black, brown, blue, gray, or white; not to be confused with the sometimes irregularly shaped surface of the *SCOBY*), or,
- does not develop a pH of ≤ 4.2 during the fermentation period.

If one of these conditions occurs, do not reuse the *SCOBY* for a subsequent batch. Start a new batch with a newly purchased commercial culture.

Chemical Hazards

Monitoring and control of ethanol during the fermentation step: Alcohol (ethanol) is a naturally occurring stage of the kombucha tea fermentation process (as shown in Figure 1). According to the BC Liquor Control and Distribution Act, a maximum of 1% ABV (ethanol) is permitted in beverages before they are defined as a liquor, and subject to the regulations of this Act.²⁶ Over-fermentation of products has been an issue with past kombucha products.²⁷ When microbes (yeast and bacteria) are not inactivated, and when the kombucha and juice are placed under anaerobic conditions, there is the possibility that fermentation of the added sugars (from the juice) will resume if the product is taken out of temperature control.²⁸ It is the responsibility of the processor to ensure that their kombucha does not exceed 1% ABV at time of bottling or during shelf-life and potential consumer abuse and mishandling of the product.

The processor is advised to monitor ethanol during fermentation to ensure alcohol content does not exceed 1% ABV at time of bottling. Best practice recommendations for the processor are to set a critical limit of 0.5% ABV or less with 1.00% ABV as the maximum allowable before bottling or kegging the product. Processors should keep log records of alcohol testing and ensure every batch of kombucha meets a 1% or less ABV. Log records will demonstrate whether there is batch to batch variation. If the kombucha product produced consistently meets the objective of 1% ABV or less, a reduced frequency of monitoring for alcohol is acceptable. When the critical limit is not met operators may choose to control alcohol by diluting the tea, by continuing fermentation until alcohol levels drop, by diverting this product

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to an alcoholic product subject to licencing by the Liquor and Cannabis Regulatory Board, discarding the batch, or by some other means of controlling alcohol in the product. Validated methods of testing for ethanol should be chosen by the processor (see Appendix 1).

Monitoring and control of ethanol during the shelf-life of the product or during consumer abuse and mishandling: Processors should consider the effects of flavoring agents during bottle conditioning and temperature abuse that is likely to occur by consumer mishandling. Control of alcohol in the product is the responsibility of the processor. To stop over-production of alcohol, as described previously, the processor should consider pasteurization, addition of preservatives, cold-shocking the *KT* culture to kill off yeasts, or some other measure that would remove or inhibit yeasts to prevent further metabolism of sugars into alcohol.

Monitoring and control of pH during the fermentation step: There are two potential hazards of concern regarding pH during the fermentation step: the production of acetic acid in a timely manner, so as to transform the initial tea infusion from a potentially hazardous food (PHF) to a non-PHF, and, at the opposite end, the over-production of acetic acid to hazardous levels. These hazards are mitigated through the monitoring and control of pH levels during the fermentation step. Acceptable monitoring includes using a calibrated digital pH meter for accuracy (versus using paper pH strips). The control of these hazards is described below:

1. Production of acetic acid in a timely manner:

The initial tea infusion typically starts at pH ~ 5. Per the *2013 US Food Code*²⁹, the initial tea infusion isn't a PHF if the pH is ≤ 4.6. At this point, the heated tea is at a pH greater than 4.6 but not yet packaged, therefore it may be subject to contamination. Since *KT* fermentation is targeted to finish below pH 4.2, this process would require food safety monitoring to ensure the finished pH corresponds to recommended pH levels. The main corrective action, if the pH is > 4.3, would be to continue fermentation and re-measure the pH. If the pH does not reach pH ≤ 4.2 in seven days, the culture is most likely contaminated or the fermentation temperature is too cold. In either case, discarding the *KT* is recommended. Start a new batch with a newly purchased commercial culture. Written pH records of batches of *KT* should be kept to verify that safe pH levels are consistently reached.

2. Overproduction of acetic acid:

This hazard is controlled by stopping the further development of acetic acid when the pH approaches 2.5. This is accomplished by refrigerating the fermented tea (now *KT*) and keeping the product refrigerated until consumed.

Appropriate materials to use: Because the potential exists for the acidic product to leach out chemical contaminants such as lead, the sweetened tea should be fermented and packaged in food-grade glass. Other acceptable container types reported include china, lead-free glazed earthenware, food-grade stainless steel, and food-grade high density polyethylene (HDPE) and polypropylene (PP).

Risk of over-consumption and acidosis: An investigation by the *US FDA* concluded that *KT* is not harmful at a consumption of 110 ml (4 oz) per day for healthy individuals.⁸ However, potential risks can be associated with excessive consumption or consumption by individuals with pre-existing health problems.

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Recommendations from BCCDC:

The Food Safety Plan and support materials submitted by the processor were comprehensive. The processor has done extensive research on the subject, and is knowledgeable of the process and potential hazards. Recommendations are as follows:

1. Hygiene and Sanitation

Fermentation and preparation areas: The processor proposes the fermentation and packaging to be done in a commercial kitchen. Provided the areas are kept clean and sanitary, and cross traffic during processing is minimized, these should be acceptable locations.

Utensils and vessels including kegs for packaging: There is minimal information provided regarding the cleaning and sanitizing of the utensils, vessels and kegs. From a food safety evaluation viewpoint, the same basic principles for cleaning and sanitizing utensils/vessels/kegs in a food service establishment can be applied to the production of *KT*.

2. Appropriate Materials Used

The processor proposes using a stainless steel vessel for the fermentation step and a stainless steel keg for packaging the finished *KT*. Provided these are confirmed to be food-grade, these should be acceptable.

3. Monitoring and Control of Alcohol and pH During the Fermentation Step

The processor should include a plan to monitor ethanol, record the finding and how to manage the batch should the percentage of alcohol exceed 1% ABV.

The processor proposes to monitor the pH using a calibrated pH meter during the fermentation step (10-12 days) to ensure acetic acid production to a pH of ≤ 4.2 . The processor's target pH is ≤ 3.2 . The processor is aware that a pH of < 2.5 may be hazardous. This is acceptable, provided adequate records of each batch are kept for future reference, and the manufacturer's calibration procedures for the pH meter are followed.

4. Packaging of *KT*

After the fermentation step is complete, but prior to packaging, the processor will add pasteurized, commercially produced juice for flavour. The processor will re-check the pH at this point to ensure it is less than 4.2 and greater than or equal to 2.5. This should be acceptable.

The processor proposes to then package the finished *KT* into a clean and sanitized keg. The filled keg is afterwards refrigerated and carbonated. The filled kegs are kept refrigerated until dispensed to customers for immediate consumption. Provided that

- the cleaning and sanitizing of the re-used kegs are adequate, and,
- the kegs and carbon-dioxide are food-grade, and,
- the kegs are kept under refrigeration at all times after filling and prior to being dispensed for immediate consumption,

then this procedure should be acceptable.

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5. Further recommendations

Guidance for processors and EHOs on items that must be covered in the Food Safety Plan specific to chemical hazards

Food safety plans

- Should include excess acid and alcohol as chemical hazards.
- Processors should monitor and test for pH and alcohol.
- At time of bottling
 - pH levels should not be below a pH of 2.5, and
 - alcohol levels should not exceed 1% alcohol by volume (ABV) AND should not increase during the shelf life of the product.

This means that processors should have available

- Log records demonstrating that pH and alcohol is tested
- Critical limits for alcohol that should not exceed 1% ABV or higher
- Critical limits for pH that should not exceed a pH of 2.5 or lower
- Correction actions in their food safety plan that will address when alcohol is too high (i.e. above 1% ABV) or pH is too low (i.e. less than 2.5).

The food safety plan (FSP) must include corrective action and critical limits as appropriate such as

- At end of fermentation if the alcohol limit exceeds 1% ABV in the batch then
 - The batch should be diluted with water, OR
 - The batch should be diverted to be an alcoholic kombucha (i.e. would need licence from LCRB), OR
 - The batch should be discarded, OR
 - The fermentation should continue for X time period and re-tested, OR
 - Some other mitigation as demonstrated by the processor to address the hazard.

Labelling considerations

Kegged products: to minimize the risk to public health, a written label should accompany each keg with the following information:

- Clearly identifies the product;
- A list of the ingredients should a consumer ask (for allergenic reasons);
- A product shelf life;
- Storage instructions (product to be kept refrigerated at $\leq 4^{\circ}\text{C}$ at all times);

Further, in a pressurized enclosed vessel, should temperature rise to allow fermentation to resume, there is the possibility that the tank would be under increasing pressure from release of CO₂, with a

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potential explosion hazard. Therefore, as previously recommended we stress that the keg remain refrigerated at all time during distribution and dispensing to prevent these hazards, and that batches of kombucha be periodically monitored for ethanol content to ensure that the process is not producing an alcoholic beverage.

Bottled products sold at retail: to inform consumers about product contents when kombucha is a raw (living unpasteurized product) that has the potential to contain alcohol

- Labels on kombucha should include traceability for batches and provide a clear Best Before Date for products.
- Labels should also include appropriate warnings for handling and alcohol. We recommend these include:
 - Label all live (unpasteurized) kombucha with “keep refrigerated” statements and other handling instructions as appropriate “do not shake, contents under pressure”
 - Label all kombucha products with consumer warnings that address alcohol, particularly when an ABV of greater than 0.5% occurs in the product.

Because of the potential risk of over-consumption, it is also recommended that the processor also include a serving size suggestion on the label to state serving amounts should be no more than 110 ml (4 oz) per day.

Regulatory requirements for kombucha beverages are shown in Appendix 2.

In conclusion, the recipe and food safety plan provided by the processor can be reasonably assumed to be safe, provided the above recommendations are followed.

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Appendix 1 – Alcohol testing

Processors seeking analytical testing services should ensure they select labs that are using validated methods that have been demonstrated to be fit for the analysis of kombucha products. Methods traditionally employed for the quantification of ethanol in beers and wines are not suited and/or do not possess the required accuracy for analysis of kombucha.

The AOAC International Kombucha working group established performance requirements for the detection of ethanol in Kombucha products,

http://members.aoac.org/aoac_prod_imis/AOAC_Docs/SMPRs/SMPR%202016_001.pdf.

The limit of detection for the chosen method should provide a resolution to $\leq 0.05\%$ ABV and be able to measure alcohol in the range of 0.1 to 2.0% ABV.

There are a number of methods that have been found to meet these requirements, which include:

- headspace gas chromatography with mass spectrometry detection (HS-GCMS) method,
- headspace gas chromatography with flame is detection (HS-SPME-GCMS) method and
- an enzymatic method developed by r-Biopharm.

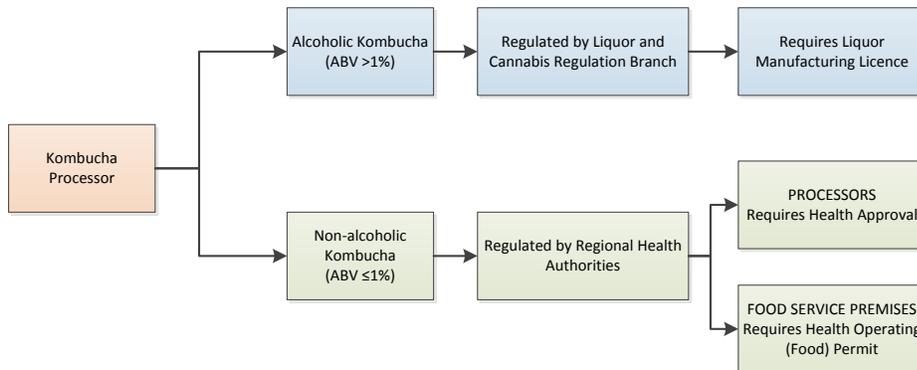
Kombucha Brewers International (KBI) the association for commercial brewers has also provided advise on testing to members, <https://kombuchabrewers.org/resources/approved-alcohol-testing-methods/> They explain that traditional in-house testing methods may not be suitable to meet regulatory requirements as the accuracy of these methods are too low, reading to a scale of +/- (plus or minus) 1% ABV. They recommend that while some traditional methods may be used in-house to monitor the process, only approved methods of kombucha, such as those listed above, should be used to determine the final ABV percentage.

Check the web-site to get updates on the types of validated methods recommended.

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Appendix 2 – Regulatory Requirements

It's important to be aware that producing a beverage with an alcohol-by-volume (ABV) greater than 1 percent (>1%) requires the processor to have a liquor manufacturer licence. Liquor manufacturing is regulated by the Liquor and Cannabis Regulation Branch (LCRB). If your intention is to produce kombucha with an ABV in excess of 1 percent you must contact the LCRB and apply for a manufacturer's licence before producing any more product.



Liquor and Cannabis Regulation Branch

If you would like more information about obtaining a liquor manufacturing licence, please see the manufacturing section on the LCRB's website at;

<https://www2.gov.bc.ca/gov/content/employment-business/business/liquor-regulation-licensing/liquor-licences-permits/applying-for-a-liquor-licence-or-permit/manufacture-liquor-licence>

To contact LCRB you can send an email to LCRBLiquor@gov.bc.ca or you can call toll-free within Canada: 1 866 209-2111 and in Victoria the number is 250 952-5787.

If your intention is to produce kombucha that is not considered an alcoholic beverage (less than or equal to 1% ABV or ≤1% ABV) it is your responsibility to ensure your product does not exceed the ABV threshold. Continuing to produce kombucha that exceeds the threshold is unlawful and will be subject to penalty. We encourage you to review your production and distribution process to ensure your product remains below the legal ABV threshold.

Regional Health Authority

Pursuant to section 23(4) of the British Columbia Food Premises Regulation; http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/11_210_99

all kombucha processors are required to have a food safety plan approved by the Regional Health Authority where the processor operates (a health approval). These procedures must identify all critical control points, including the process by which ethanol concentrations will be maintained at <1% ABV.

Environmental Health Officers may review the food safety plan during inspections and may require evidence that the procedures outlined are adequate and being followed (e.g. lab samples to determine alcohol content).

Food service premises where kombucha is provided for immediate service (e.g. restaurants) will require a Health Operating (Food) Permit and a food safety plan as described above.

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References

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