



## Kombucha

### Background:

Kombucha is a fermented beverage that has been gaining popularity in recent years. It is made using tea, sugar, and a starter culture. The beverage has been marketed as a probiotic and rich in antioxidants.

### Safety Concerns:

- Improper fermentation may lead to increased microbial growth with: *Clostridium botulinum*, *Bacillus cereus*, *Staphylococcus aureus*, and mold.
- Improper Sanitation

### Things to Know:

- Kombucha fermentation is a specialized process and requires a variance issued by the Maricopa County Environmental Services Department (MCESD).
- Kombucha must be produced at a permitted commercial kitchen approved by MCESD.
- The starter “mother” culture must be from an approved commercial source and subsequent “daughter” cultures must be safe, wholesome, and unadulterated.
- Kombucha fermentations must achieve a pH of 4.2 or lower within 7 days.
- All flavor enhancements must be included in the submittal for review.
- Final products must be sent to a certified lab to test for pH and water activity. It is recommended to test for alcohol by volume (ABV) to ensure compliance with the State of Arizona's alcohol threshold.
- Depending on the recipes, the kombucha products may need to be evaluated by a food processing authority.

### HACCP/Variance Program

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### Definition:

#### Fermentation:

Typically involves the conversion of complex organic compounds to simpler compounds. Microorganisms like yeast and bacteria usually play a role in the *fermentation* process, creating beer, wine, bread, kimchi, yogurt and other foods. Acid is formed in the process and reduces the pH of low-acid foods to 4.6 or below.

### 2017 FDA Code References:

**3-502.11** Variance Requirement

**8-201.14** Contents of a HACCP Plan



# Kombucha (continued)

Establishments seeking approval for a variance for kombucha shall complete and provide the following:

1. Complete the application:

- PDF: <https://www.maricopa.gov/DocumentCenter/View/5805/HACCPVariance-Application-PDF>
- Online: <https://www.maricopa.gov/FormCenter/Environmental-Services-16/VarianceHACCP-Application-Web-Form-238>

2. Application Fees

3. Detailed food preparation process

4. Complete Hazard Analysis and Critical Control Point (HACCP) plan

5. Submit standard operating procedures (e.g. employee health, calibration of thermometers and pH meters, and cleaning and sanitizing)

6. Sample log sheets (e.g. cooking, thermometer and pH meter calibration, staff training, etc.)

7. Specification sheets for equipment needed

8. Records must be retained for at least 180 days

9. Distribution of the product to include whether it will be sold in-house or sold to other retailers

Note: If operating in a shared kitchen, provide details on how food process will be protected

**Incomplete paperwork may delay the review process.**

## Resources:

<https://www.fda.gov/Food/GuidanceRegulation/HACCP/ucm2006801.htm>

[http://food-safety.guru/wp-content/uploads/2014/06/JEH11-13\\_Special\\_Report\\_Kombucha-Brewing.pdf](http://food-safety.guru/wp-content/uploads/2014/06/JEH11-13_Special_Report_Kombucha-Brewing.pdf)

<https://www.maricopa.gov/DocumentCenter/View/29747/HACCPVariance-Guidance-PDF>

<https://www.fda.gov/food/hazard-analysis-critical-control-point-haccp/haccp-principles-application-guidelines#app-b>

<https://www.maricopa.gov/4533/English-AMC-Toolbox>



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