

HACCP



PASTEURIZATION OF JUICE HACCP GUIDANCE

This guidance is for food service operators who want to commercially prepare pasteurized juice and do not already have an approved Hazard Analysis Critical Control Point (HACCP) plan.

For Retail Operators
Rev 2.0-5/23

Carson City Health & Human Services
Environmental Health Division

900 E Long St.
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Pasteurized Juice Guidance for Food Service

Background Information

There are two kinds of juices, pasteurized and unpasteurized. The difference between pasteurized and unpasteurized juice is if it has been treated. Pasteurized juice is required to be heated to a high temperature within a short period of time in order to kill harmful bacteria. Unpasteurized juice is made from fresh fruit and/or vegetables that may have harmful bacteria transferred into the juice. Bottled unpasteurized juice is recommended to have a warning label notifying consumers of the risk.

There are three forms of juicing and only one of them requires a HACCP Plan.

1. Fresh Squeezed Juiced (Not prepackaged)

- a. This form of juicing requires the juice to be made on-site at the food establishment. There is not labeling requirements for fresh squeezed juice. No HACCP plan is required for this form of juicing.

2. Packaged Juice (Unpasteurized)

- a. This form of juicing requires the juice to be made on-site at the food establishment. **The product is required to have a consumer advisory label and can only be sold via direct sale.** This form of juicing is not permitted to be sold to high risk populations (i.e. preschools, nursing homes, hospitals.) No HACCP plan is required for this form of juicing.

WARNING: This Product has not been pasteurized and, therefore, may contain harmful bacteria that can cause serious illness in children, the elderly, and persons with weakened immune system.

3. Prepackaged Juice (Pasteurized/Treated)

- a. In order to sell prepackaged juice a wholesale permitted is requires as well as a HACCP plan. This kind of juice may be purchased from approved suppliers who previously pasteurized or treated under a HACCP system. Pasteurization or other treatment method must be validated to achieve at least a 5-log reduction and treatment records are mandatory.

How to Obtain a Waiver to Manufacture Prepackaged Juice

A food service establishment must obtain a wholesale permit and have a HACCP plan approved by the health department before they can manufacture prepackage juice. The plan must identify basic food safety practices such as pH monitoring.

Your establishment must be in good standing and demonstrate control of food safety risk factors in order to qualify for a waiver approval.

1. A waiver request application form must be completed and submitted to your local health inspector for review and approval.
2. If you do not already have a written HACCP plan developed to submit with the waiver, an **Juice HACCP Supplemental Information Form** may be completed and submitted to help you document the necessary information. This supplemental information completed in detail may be sufficient to function as your food safety "HACCP" plan; however complex processes may require full HACCP implementation.
3. Employees must be properly trained on your process. Training procedures should be included with your submission.
4. All critical control points in your process (CCP's) will require record keeping. Copies of the logs you will use should be included in your submission.

Pasteurized Juice Guidance for Food Service

Pasteurization Methods

There are multiple methods for pasteurizing juice. Two main methods used are the vat and the HTST (High Temperature/ Short Time) method. Under both methods the juice must be reach certain temperatures and held for a period of time in order to kill bacteria and harmful pathogens. The following two methods can be found at [FDA web site](#).

- **Vat (Low Temperature / Longer Time) Method**

In the vat or batch method of pasteurizing juice:

- Heat is applied to one large lot or batch.
- The entire batch is held long enough to achieve 5-log reduction.
- The juice is cooled after pasteurization.

With this pasteurization method, both the time and temperature of the juice treatment must be monitored to ensure that the process is achieving the 5-log pathogen reduction.

The vat method of juice pasteurization is often used by small juice operators. However, as with any method of pasteurization, the vat method requires proper mixing and temperature monitoring.

- **HTST (High Temperature/Short Time) Method**

With the HTST or continuous method of pasteurizing juice, large amounts of product can be heated and cooled quickly.

- The product flows over plate or tubular heat exchangers.
- Heated product then flows through holding tubes.
- The product is held for a specific time and temperature in the holding tubes.

Critical Control Points

There are critical control points to monitor when pasteurizing juice. The following questions are recommended by the [FDA](#) when coming up with a HACCP plan. The following questions should be addressed when either process is being conducted:

- Were the heating requirements met and continuously monitored during pasteurization?
- Were the holding time requirements met and continuously monitored during pasteurization?
- Are accurate charts and records kept?

Key questions to ask for HTST systems include:

- Are visual checks of the timing pump periodically performed to ensure that it is delivering the proper flow rate?
- Is the pasteurized juice discharged from the regenerator properly?
- Is the holding tube properly constructed?
- Are the vacuum breakers functioning properly?

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- Employees must be properly trained on your process. Training procedures should be included with your submission.
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- Your establishment must be in good standing and demonstrate control of food safety risk factors in order to qualify for a waiver approval.

Special Processes Requiring a Full HACCP Plan & Process Authority

The Carson City and Douglas County Public Health Regional Partnership reserves the right to require full HACCP and/or process authority review and approval for any process when they deem is necessary. Contact info for several process authorities is available at: <http://www.afdo.org/foodprocessing>.

If submitting a waiver for a product or process beyond what is described in this guidance document, university extension services may be a valuable resource for finding scientific literature to support your process. i.e. (<http://food-safety.guru/>) (https://foodsafety.wisc.edu/ssp_acidified_canned_food.html) (<https://cfvc.foodscience.cals.cornell.edu/acid-and-acidified-foods/records-and-recordkeeping/>) (<https://jfoodprotection.org>) (https://www.accessdata.fda.gov/ORAU/Pasteurization/PAS_04_summary.htm)

Facilities submitting processes that do not follow existing validated methods may work with a process authority and/or conduct challenge studies to verify adequate pathogen reduction.

The principles in this supplement do not cover all foods processed for pasteurizing juice.



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Juice Requirements for Food Establishments

Fresh Squeezed Juiced
Not-prepackaged



- Must be juiced on-site at the food establishment
- No HACCP Required
- No labeling requirements

Prepackaged Juice
Untreated



- **Direct sales only**
- ***Consumer advisory labeling required**
- Must be produced at the food establishment
- No HACCP Required
- May not be served at establishments that cater to high risk populations (i.e. preschools, nursing homes, hospitals)

Prepackaged Juice
Pasteurized / Treated



- **Wholesale permitted**
- **Full HACCP plan required**
- May be purchased from approved suppliers who previously pasteurized or treated under a HACCP system
- Pasteurization or other treatment method must be validated to achieve at least a 5-log reduction
- Treatment records mandatory

***CONSUMER ADVISORY**

“WARNING: THIS PRODUCT HAS NOT BEEN PASTEURIZED AND, THEREFORE, MAY CONTAIN HARMFUL BACTERIA THAT CAN CAUSE SERIOUS ILLNESS IN CHILDREN, THE ELDERLY AND INDIVIDUALS WITH WEAKENED IMMUNE SYSTEMS”



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Juice HACCP Supplemental Information Form

Any alterations, modifications or changes to an approved HACCP, must be resubmitted for review and approval of the Environmental Health Division.

General Information

Name of Owner & Title:	Phone:
Establishment Name:	Email:
Mailing Address:	City: Zip Code:

HACCP TEAM Members

Name	Title / Role

1) List juice equipment to be used (such as juicing machines, thermometers, mixers, etc.)
 Or attach manufacturer's specification sheets. Record NA if not applicable.



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Juice HACCP Supplemental Information Form

2) Identify the Product You Plan to Manufacture and the Applicable Ingredients

Alternatively recipes may be attached.

Fruits / Vegetables	Supplier	Is the Produce Organic?
i.e. Apples		



Juice HACCP Supplemental Information Form

Definitions

Control Points in the juice process are the steps in the flow of food from receiving to service.

Critical Control Points are steps that, when done correctly, can control the possibility of a food borne illness outbreak.

Critical Limits are the maximum or minimum value to which physical, biological or chemical parameters must be controlled at a CCP to minimize the risk of a foodborne illness outbreak.

Corrective Actions are actions implemented to improve/correct a step in the process that have not met the critical limits.

Process Flow Instructions

- Examine the example process flow provided at the end of this document. Make one copy of the example process flow diagram for each juice product type you make.
- Use a highlighter or other pen to show the actual process flow you use for each product. Cross out any steps you don't use. Mark directional arrows as necessary to make the process clear.
- List all of your preparation steps (combining ingredients/processing).
- Add any other processing steps not already shown.
- Once you have determined your flow steps, you should be able to draw out your process flow.



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3) Process flow

A) Describe your process for preparing each juice type or recipe type.
Create a simple flow diagram from ingredient receiving to service
(Additional flows may be attached if needed for multiple processes or recipes)



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Juice HACCP Supplemental Information Form

4) Process steps and critical control points

What is your process to achieve a 5-log reduction?

Who is your supplier? Are you using organic fruits and vegetables?



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4) Process steps and critical control points - continued

What are the food safety hazards? (i.e. Biological, Chemical, Physical)

Biological

Chemical

Physical

Are you using organic fruits and/or vegetables?



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Juice HACCP Supplemental Information Form

4) Process steps and critical control points - continued

What corrective action is taken if critical limits for time and temperature are not achieved?

Who takes the temperature readings and how often?

Describe your bottling process (Include all time and temperature parameters)



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4) Process steps and critical control points - continued

Describe your bottling process. (Include all time and temperature parameters)

Who takes the time & temperature readings and how often?



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5) Records: Attach copies of all logs to be used for record keeping
There must be a log for each CCP

Who verifies that records for lethality and temperatures controls are properly maintained?
How often do they review the records?

Where will your lethality records be kept and for how long?

6) Packaging & Labeling

Describe how the product will be packaged and labeled.



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Juice HACCP Supplemental Information Form

7) Describe or attach operational procedures for the following subjects

Identify a designated work area for juice processing and describe the methods that will be used to prevent cross contamination. (A picture may be attached for reference if desired)

Describe how juice processes and equipment will be limited to responsible trained personnel who understand the risk involved

Describe your procedures regarding operator hygiene and prohibiting bare hand contact with ready- to-eat foods



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Juice HACCP Supplemental Information Form

7) Describe or attach operational procedures for the following subjects - continued

Describe your cleaning and sanitizing procedures for food contact surfaces.

Describe or attach your training program that ensures that staff involved in the juice operation understands the concepts required for a safe operation.

Describe or attach any additional information relevant to your process as needed.



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All juice waiver applications must be submitted to your health inspector for review and approval prior to manufacturing juice in your establishment.

By signing and submitting this form to the permit issuing official you are requesting a waiver and establishing a plan to comply with the above requirements as conditions to juice manufacturing. Failure to implement juice processing as described is subject to enforcement. Any additions or modifications to this plan must be reviewed and approved by the permit issuing official prior to being implemented.

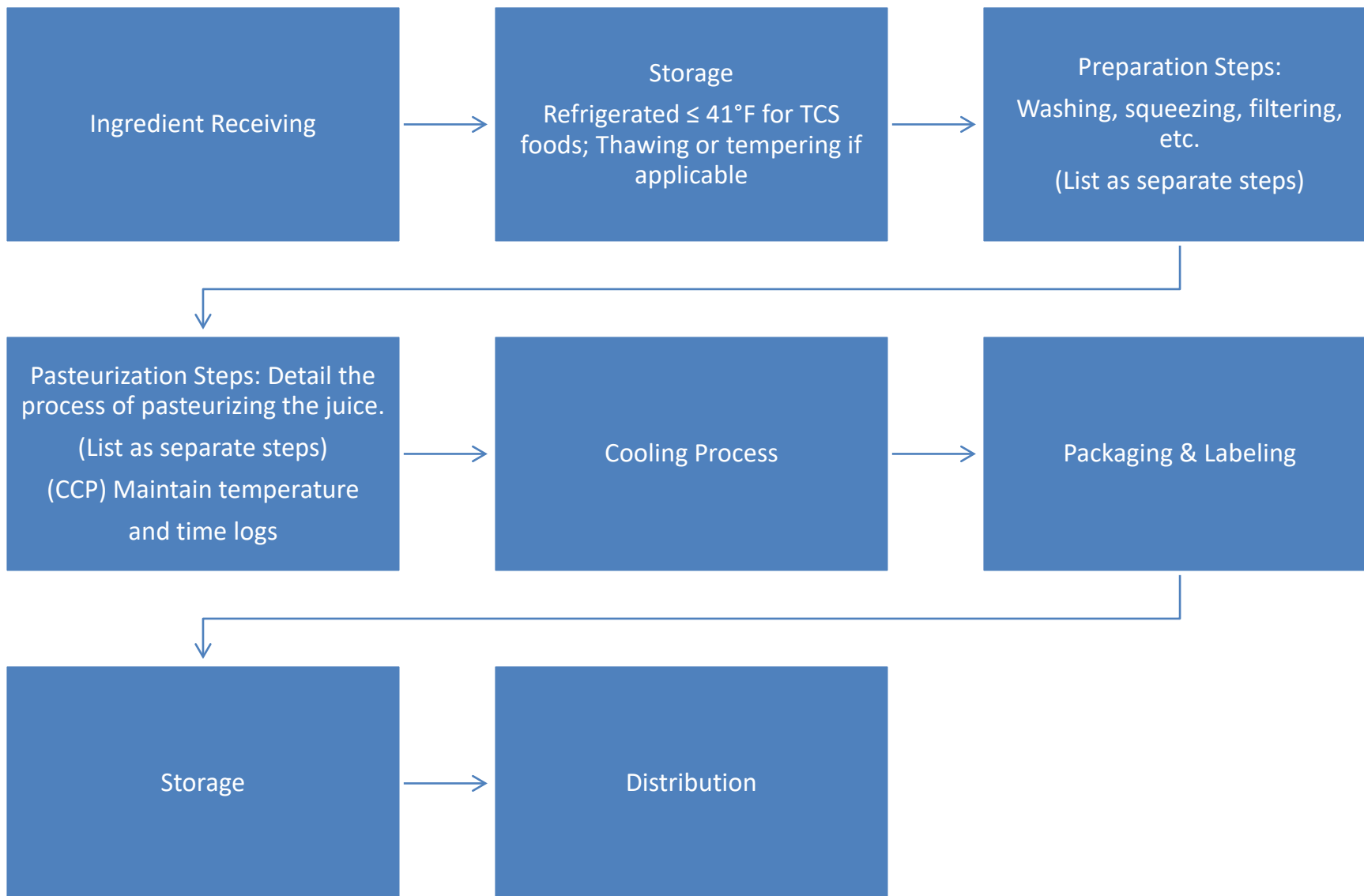
I certify that I have knowledge of the facts herein set forth and that the same are true and correct to the best of my knowledge and belief.

Signature:

Date:

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Juice HACCP Flow Example





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Juice Batch Temperature & Time Log

Product / Flavor:	
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		Ingredient	Temperature	Time Held at Temp.	Initials	
Batch :	Date :					
Batch :	Date :					
Batch :	Date :					

