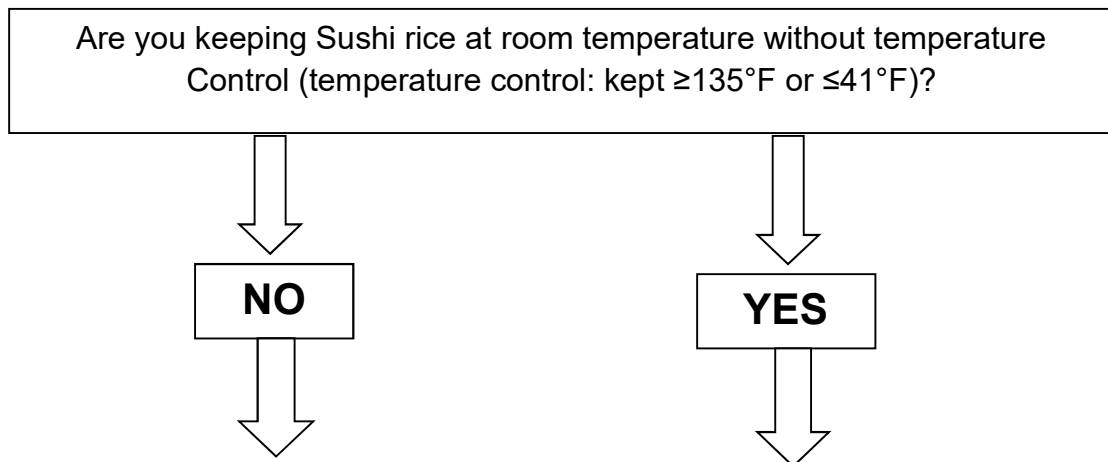




Pursuant to the 2013 FDA Food Code food facilities that prepare Sushi rice and hold it at room temperature must take additional measures to ensure safety to those that consume it. Prepared plain white rice (no acid added) has a pH range of 6.0-6.7; plain brown rice (no acid added) has a pH range of 6.2-.6.7, which makes them both a time/temperature control for safety food (TCS). Sushi rice is often prepared with vinegar to the extent it may become “acidified” having a pH below 4.2. At a **pH value below 4.2**, sushi rice is considered a non-TCS food and may be held at room temperature. The operator must choose one of the following measures to be in compliance:



- **No action required**
- **Use time as a Public Health Control**
- **Submit a HACCP Plan for your Sushi rice**

1. **No action is required** if you keep acidified cooked rice (less than or equal to (\leq) pH 4.2) at $\geq 135^{\circ}\text{F}$ or $\leq 41^{\circ}\text{F}$.
2. **Time as a public health control** for time/temperature control for safety (TCS) foods can be used in place of temperature control or pH control to ensure food safety pursuant to the 2013 FDA Food Code. Un-acidified rice may be kept at room temperature for up to 4 hours without using any temperature control equipment (hot or cold holding).

The following must occur to keep and serve the cooked rice at room temperature for a maximum of 4 hours:

- The cooked rice container must be marked to indicate the time that the cooked rice must be discarded if not used within 4-hours. The cooked rice must be served or discarded within 4-hours from the point in time when the cooked rice is removed from hot or cold holding (temperature control).

A written procedure, maintained in your facility / establishment, specifying time as a public health control shall be available for review upon request by LFCHD. **Please be advised that without a written procedure or if missing required information as listed above will result in a Food Establishment Inspection FAILURE by the LFCHD.**

Note:

- Cooked rice in an unmarked container is not allowed
- Cooked rice without temperature control exceeding a 4-hour limit must be discarded

If “time only” as a control (Option 2) is not used, and cooked rice is acidified by adding vinegar (Option 3), then a HACCP Plan must be must be available for review upon request by LFCHD.

For further assistance or any questions regarding sushi rice HACCP plans, or using time only as a public health control, please contact:
Lexington-Fayette County Health Department
Environmental Health at **859-231-9791**

- 3. A HACCP plan must be available for review upon request by LFCHD. Please be advised that an incomplete HACCP Plan or a plan missing required information as listed below will result in a Food Establishment Inspection FAILURE by the LFCHD.**

In order to acidify (target pH is **4.2 or below** and must not reach critical limit of pH > 4.2) cooked rice by adding vinegar to render it a non-potentially hazardous food. To facilitate the development of a Sushi rice HACCP plan for your facility a pH Log and a Sushi Rice Flow Diagram are included.

Division of Environmental Health and Protection

Guidelines for Validating a Sushi Rice HACCP Plan (Option 3)

According to the 2013 FDA Food Code a HACCP plan is required when food additives or components, such as vinegar, is used to render a food non-time/temperature control for safety (TCS) food, such as sushi rice. The HACCP plan shall indicate all of the following:

- Ingredients, materials, and equipment
- Formulation / recipe(s)
- A trained, designated food employee
- Standard operating Procedures (SOP) that includes the following:
 - Critical Control Points (CCPs)
 - Critical Limits
 - The method and frequency for monitoring the CCP
 - Corrective action(s) to be taken
 - The method and frequency for verifying a HACCP plan
 - Record keeping

The following must be included in the Sushi Rice HACCP Plan:

- A recipe or formulation for the sushi rice HACCP Plan, which must include all of the following:
 - Type of rice (e.g. short or long grain, brown rice, white rice, etc.)
 - The concentration of the vinegar (e.g. 5%)
- Methods of cooking the rice, including time and temperature
- Methods of preparing mixture of vinegar, salt, and sugar
- Method of cooling cooked rice, indicating time and temperature
- Method of mixing rice and vinegar solution
- Identify Critical Control Points (CCPs) (e.g. adding vinegar)
- Identify Critical Limits (target pH is **4.2 or below** and must not reach critical limit of pH > 4.2)
- Method(s) of measuring and the frequency of monitoring your CCPs (e.g. measuring the pH daily by using a pH meter or pH test strip)
- Describe your Corrective Action(s) (e.g. if the pH is not less than 4.2, the sushi rice will be discarded or more vinegar will be added)
- Policy and procedures regarding storage of sushi rice should indicate holding time and temperature (e.g. 12 hours at 70° F - 80° F)
- Describe policy regarding record keeping (e.g. keeping a record of all Sushi Rice HACCP Plan related documents for at least 2 years)

Measuring the Acidity (pH) of Sushi Rice by Using a pH Test Strip Paper

Monitoring the acidity of your sushi rice is an essential part of your approved HACCP Plan. Follow the instruction below to measure the pH of sushi rice daily:

- Use a pH meter or test strip* to accurately measure the acidified sushi rice
- Measure the acidity (pH) of your sushi rice within 30 minutes after acidification (mixing the cooked rice and vinegar solution)
- Make a rice and distilled water slurry by mixing $\frac{3}{4}$ cup of distilled water with $\frac{1}{4}$ cup of sushi rice in a clear plastic or glass cup
- Stir the slurry for 20 seconds
- Dip pH test strip or pH meter probe into the liquid portion of the rice slurry (for the time period stated in the pH test strips manufacturer's instructions or pH test meter instructions)
- Compare the color of the test strip to the color chart or read the pH test probe readout
- Record the pH in pH Log
- Add more vinegar if the pH of the sushi rice is > 4.2

You may use the following Monthly Sushi Rice pH Log and Sushi Rice Flow Diagram as a guideline to develop a Sushi Rice HACCP Plan for submission to this Division. For additional information, please contact:

Lexington-Fayette County Health Department's Environmental Health and Protection Division at **(859)-231-9791**.

*** Ensure pH test strips are adequate for the pH range required and the shelf life of the test strips does not exceed the labeled expiration date.**

Monthly Sushi Rice pH Log

Keep a copy of pH log near the sushi rice preparation area. Check the pH of sushi rice daily (each batch) by using a calibrated pH meter or pH test strip paper. If the pH of the sushi rice is greater than 4.2, record the corrective action in the last column. The Sushi Rice Log must be maintained by the establishment for two (2) years.

Facility Name: _____ Address: _____

Date	pH of sushi rice (4.2 or below)	Corrective Action
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		

Sushi Rice Flow Diagram

Receiving: Receiving Dry Ingredients (such as Rice, Sugar, Salt, Vinegar, etc.)

Dry Storage: Storing dry ingredients in your dry storeroom

Preparation: Assemble all ingredients and utensils. Weigh or measure all ingredients according to the recipe. Note: If rice is pre-soaked in water for more than 2 hours, soaking must take place under refrigeration (41 ° F or below)

Vinegar, Sugar and Salt Solution:

- Measure ingredients per recipe
- Prepare vinegar, sugar and salt solution per recipe
- Heat the mixture to dissolve sugar & salt (do not boil)

Rice:

- Measure rice and water
- Cook rice in rice cooker (indicate time & temperature)
- Cool rice to 70° F or below in shallow pans in less than 2 hours (describe cooling procedure)

Add vinegar solution to rice. Mix the mixture continuously with paddle (indicate time and temperature). Use a calibrated pH meter or a pH test strip paper to measure the pH of Sushi rice daily. Record the pH in pH daily log.

YES

Target pH is 4.2 or below

NO

- Hold rice at room temperature, the rice must have an initial temperature of 41° or less from cold holding control, or greater than 135° when removed from hot holding.
- Indicate time and temperature (for example: 2:00 PM at 40° discard at 6:00 PM)
- Discard rice after 4 hours

Take Corrective action:

- Add more vinegar solution, if made within 2 hours
- Measure the pH to ensure it is 4.2 or below

Record Keeping: Keep the following Sushi rice HACCP plan documents for two years:
Daily pH log; Record of corrective action taken; Record of the Sushi rice HACCP Training program for designated employee(s)