

### **Guidelines for Sushi Rice HACCP Plan (Option A)**

According to the Regulations of the Washoe County District Board of Health Governing Food Establishments, [Section 050.335, Subsection C \(1\)](#), food establishment operators that are using food additives or adding components such as vinegar to render a food so that it is not potentially hazardous (time/temperature control for safety), such as sushi rice, shall obtain a waiver from the WCHD and submit a HACCP plan ([Section 110.005, Subsection A \(1\)](#)) for approval. The HACCP plan shall include the following:

1. Documentation of training program for employees and supervisors involved in HACCP procedures
2. A recipe or formulation including the following:
  - a. List of ingredients, including the type of rice (e.g. short grain)
  - b. The concentration of the vinegar (e.g. 5%)
  - c. Preparation methods for vinegar, salt, sugar mixture
  - d. Cooking and cooling methods for the rice including:
    - i. Equipment and materials
    - ii. time and temperature
  - e. Method for mixing rice and vinegar solution
3. Determine the critical control points (e.g. adding vinegar) and develop a process flow diagram that identifies the critical control points (CCP) -see attached example **Process Flow Diagram**
4. Document the following steps on the [HACCP Worksheet](#)
  - a. List the specific biological, physical, or chemical hazards associated with the process
  - b. List the CCP identified in step number 3 above
  - c. Identify critical limits for CCP (target pH is < 4.0 and must not reach critical limits >4.2)
  - d. Methods and frequency of monitoring CCP (e.g. measure pH of each batch by using a pH meter or pH test strip paper accurate to 0.2-0.3 and record on log - see **Measuring The Acidity (pH) of Sushi Rice By Using a PH Test Strip Paper** and example **Sushi Rice pH Log**).
  - e. Describe corrective actions if critical limits are not met (e.g. if the pH is > 4.2, more vinegar will be added or product will be discarded)
  - f. Describe verification procedures (e.g. pH logs reviewed and checked by manager at end of each shift)
  - g. Record keeping policy (e.g. sushi rice pH log and all HACCP related documents are kept for 2 years)
5. Policy for leftover sushi rice (e.g. discard leftover rice after 12 hours)
6. All supporting Standard Operating Procedures (SOP) and policies (e.g. employee health and hygiene SOP, calibration of pH meters and thermometers SOP, cleaning and sanitizing SOP). List attached SOPs on the HACCP Worksheet under "Prerequisite Programs"
7. A copy of all blank logs e.g. Sushi pH Log, temperature logs, and cooling logs



8. The pH of the sushi rice must be initially validated by a certified laboratory to indicate the final pH is 4.2 or less (include laboratory results with submitted plan)
9. A sample of sushi rice must be sent for pH testing to a certified laboratory when:
  - a. Changing recipe or ingredients
  - b. Annually, after the initial submission of the HACCP plan

#### **List of Laboratories Measuring the pH of Sushi Rice in Washoe County:**

- Western Environmental Testing, 475 E. Greg Street, Suite 119, Sparks 355-0202
- Sierra Environmental Monitoring, 1135 Financial Blvd, Reno 857-2400
- Alpha Analytical, 225 Glendale Ave, Suite 21, Sparks 355-1044

\*Please be advised that this list may not be inclusive and should not be considered an endorsement by this Division. Please contact the individual laboratories directly to obtain current information regarding their location, fees, etc.

#### **Measuring The Acidity (pH) of Sushi Rice by Using a pH Test Strip Paper**

Subsequent to initial pH verification from a certified laboratory and approval of the HACCP plan, the following procedures can be used to monitor the pH of your sushi rice:

- Use pH test strips accurate to 0.2 to 0.3
- Measure the acidity (pH) of your sushi rice within 30 minutes after acidification (mixing the cooked rice and vinegar solution)
- Make rice slurry by mixing  $\frac{3}{4}$  cup of distilled water and  $\frac{1}{4}$  cup of sushi rice in a clear plastic or metal cup
- Stir the slurry mixture for 20 seconds
- Dip pH test strips into the liquid portion of the rice slurry (according to manufacturer's recommended time period)
- Compare the color of the test strip to the color chart
- Record the pH on the Sushi Rice pH Log
- If pH is above 4.2, add more vinegar until sushi rice pH is measured at 4.2 or less

## Example Process Flow Diagram

**Receiving:** rice, vinegar, salt, sugar – upon receipt, verify package still maintains integrity



**Dry Storage:** transfer dry ingredients to dry storage room



**Preparation:** Assemble ingredients and utensils, measure ingredients according to recipe



### **Vinegar, Sugar, Salt Mixture:**

- Measure ingredients according to recipe
- Prepare vinegar, sugar, and salt solution per recipe
- Heat mixture to dissolve sugar/salt

### **Cook and Cool Rice:**

- Cook rice in rice cooker – indicate time and temperature
- Cool rice to desired temperature – describe process including desired temperature



**Acidification -Vinegar and Cooked Rice Mixture:** mix the rice and vinegar continuously and measure pH (using calibrated pH meter or test strips accurate to 0.2-0.3) using the slurry method to ensure pH of 4.2 or less. Record on pH Log. **CCP 1**

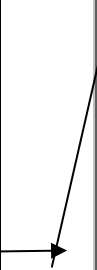


**Holding Cooked Rice:** hold cooked rice at room temperature and discard after 12 hours.

**Example HACCP Worksheet**

Menu Items:

Restaurant Name and Address:

HAZARDS		CRITICAL CONTROL POINTS (List Only the Operational Steps that are CCPs)	CRITICAL LIMITS	MONITORING (who, what, how, frequency)	CORRECTIVE ACTIONS	VERIFICATION	RECORDS
<p>Bacillus Cereus Staphylococcus Aureus</p>		<p>CCP 1: Acidification of cooked sushi rice</p>	<p>Acidify to maintain a pH of 4.2 or less</p>	<p>Cook will measure pH of each batch with test strips/calibrated pH meter and record on pH Log</p>	<p>If pH is above 4.2, add more vinegar until pH is measured below 4.2</p>	<p>pH Logs checked and initialed by manager at the end of each shift</p>	<p>pH Logs, Calibration Logs and Temperature Logs kept for 2 years</p>
		<p><b>PREREQUISITE PROGRAMS:</b> 1. SOP – Employee Health, 2. SOP – Handwashing, 3. SOP – Cleaning/Sanitizing Equipment</p>					



