



Sushi Rice Testing Fact Sheet

Introduction to Sushi Rice Testing

It is important to test your food products for safety. Foods that do not meet certain specifications can encourage the growth of bacteria and cause people to get sick (foodborne illness).

In South Carolina the Department of Health and Environmental Control (DHEC) regulates food safety in retail food establishments. There are specific DHEC regulations for sushi rice. Normally prepared rice (no added acid) has a pH range of 6.0 – 6.7 which makes it a time temperature control for safety food (TCS). TCS foods require strict attention to time/temperature control during preparation, holding, serving and storing. Sushi rice is often prepared in a manner that cannot realistically meet the time and temperature requirements for TCS foods. So, as an alternative, sushi rice can be “acidified” and treated as a non-TCS food. The addition of vinegar is a common method for acidifying sushi rice. Properly acidified sushi rice will have a pH value of less than 4.2. DHEC requires that establishments, who prepare rice for sushi, obtain a variance to standard regulations. The variance is approved when sushi rice preparation consistently produces a product with the required pH of less than 4.2. Sushi rice testing with the Clemson University Product Testing Lab is accepted by DHEC for pH documentation.

The following detailed instructions for sushi rice testing at Clemson University will guide you to through the testing process.

Objective of Product Testing

- To make sure consumers get a safe food product that does not encourage the growth of bacteria, leading to foodborne illness.
- To protect you and your business: If someone gets sick after eating your product you can be held responsible and subject to a lawsuit.
- Provide documentation that the process that your establishment uses to

produce sushi rice results in an acceptable pH for classification as a non-TCS food.

Description of Product Testing Analysis

- Sushi rice will be tested for acidity. Acidity provides information about the potential for bacteria to grow in sushi rice. The more acidic the food (low pH), the less likely the food will promote bacterial growth. Federal and state food regulations allow sushi rice to be classified as non-TCS when pH is measured at less than 4.2.

Submitting Sushi Rice for Product Testing

- Print and complete the **“Sushi Rice Product Testing Request Form”** available online at the Clemson Extension Food2Market website: http://www.clemson.edu/extension/food_nutrition/food2market/product_testing.html. No substitutions for this form will be accepted. This form must be completed in its entirety and submitted with product samples and payment. Failure to submit the completed form will delay product testing results.
- Package should include:
 - **“Sushi Rice Product Testing Request Form”**
 - One refrigerated sample of sushi RICE from four different batches (**4 samples total**)
 - Check made payable to “Clemson University”**
 - Mail to:

Clemson University, C/O Dr. Julie Northcutt
Product Testing Laboratory, Department of Food, Nutrition & Packaging
Science 223 Poole Agricultural Center
P.O. Box 340316
Clemson, SC 29634-0316

KEEP REFRIGERATED

- Note: UPS, Post Office and/or FedEx sometimes question the above address. Please tell them to send the package to the address above exactly as listed. It will get to the correct location by using this address.

- Packages must include Dr. Julie Northcutt's name as listed above. If not included, we cannot ensure that samples will be tested in a timely manner.
- Products must be mailed to the address listed above. Absolutely no in- person deliveries of product samples will be accepted.
- Please mark on the outside of the shipping package "refrigerated or frozen upon arrival".
- Ship samples in refrigerated leak-proof containers. Broken, leaking or improperly sealed and marked samples will not be tested. Some examples of acceptable containers are Tupperware, plastic, and heavy-duty zip lock bags. Samples may be kept refrigerated by surrounding the sample containers with freezer packs.
- Each sushi rice sample should equal approximately 1 cup. Testing four batches allows us to demonstrate to SC DHEC that the product is consistent from one batch to the next.
- Cash is not an acceptable method of payment for product testing. Checks are accepted but must be made payable to "Clemson University".
- Please note that products cannot be accepted when the Product Testing Laboratory is closed. Make sure that samples are not scheduled to be delivered on holidays, weekends or on the following dates:
 - March 21-25, 2022
 - November 7-8, 2022
 - November 23, 2022 – January 10, 2023 (Note that samples received on or after November 25 will not be tested until the lab re-opens in January)
 - March 20-24, 2023
- For questions about product testing process please contact Kimberly Baker: kabaker@clemson.edu or 864-359-3386 or Adair Hoover: cpope@clemson.edu or 864-656-9986. **Do not** call Clemson University's Department of Food, Nutrition and Packaging Science. This office is unable to answer any questions regarding product testing.
- The Product Testing Laboratory is not responsible for lost, spoiled or broken samples.
- ** We now accept major national credit cards! Please see our website [Food2Market | College of Agriculture, Forestry and Life Sciences | Clemson University, South Carolina](#) for details. There is a 3% convenience fee for this service. **

Test Results

- Please allow a minimum of four (4) weeks for testing results to be returned.
- Please keep in mind that Clemson University is an educational institution, and all faculty, staff and employees have other responsibilities in addition to the product testing lab.
- A copy of your results will be sent to you **and** a SC DHEC regulatory authority via e-mail by default or by mail if e-mail is not available. Maintain a copy of these results for your records as SC DEHC authority can audit your process at any time and you will be held liable if you do not have evidence of your product testing.

Interpreting Your Results

- Sushi rice that has a tested pH value of less than 4.2 will be approved for classification as a non-TCS food.
- A pH value above 4.2 will require that you increase acid in rice and submit additional samples. Cost for additional testing is \$25.

Parisi¹, M. A., E. L. Steinberg², and J. K. Northcutt³. 2012. Product testing and nutrition labeling factsheets. Prepared for the Department of Food, Nutrition and Packaging Sciences, Clemson University. ¹Assistant Professor, Winthrop University, Rock Hill, SC and Adjunct Assistant Professor, Clemson University; ²Graduate Research Assistant, Clemson University; ³Professor, Clemson University.

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