



Food Protection Program Policies, Procedures and Guidelines

Issue: Using Acidification to Make Cooked Rice a Non-Time/Temperature Control for Safety (TCS) Food

No: RF 3-3 (105 CMR 590.003; FC 3-502.11, FC 8-201.13, and FC 8-201.14)

Purpose

Any food establishment, which acidifies rice in order to render it a non-time/temperature control for safety (TCS) food, must obtain a variance from the board of health (BOH) in accordance with 590.003: FC 3-502.11 Variance Requirement. A request for such a variance must be accompanied by a HACCP plan in accordance with 590.008; FC 8-201.13. 590.008: FC 8-201.14 identifies the required contents of a HACCP plan including the identification of hazards, critical control points (CCPs), monitoring procedures, critical limits and corrective actions. The plan must also identify records maintained for monitoring CCPs and methods for verifying that the plan is working.

Public Health Rationale

A Hazard Analysis Critical Control Point (HACCP) plan is necessary when conducting specific food processes such as acidification. Such processes have historically resulted in more foodborne illness than standard processes. They present a significant health risk if not conducted under strict operational procedures. Cooked rice is a TCS food. If the pH of the rice is not brought down below 4.6, it may be able to support the growth of pathogens when stored at room temperature. The preparation of vinegared sushi rice may require the person in charge and food employees to use specialized equipment and demonstrate specific competencies. The variance requirement is designed to ensure that the proposed method of operation is carried out safely.

The HACCP plan must include the following:

- ❑ There must be a written recipe or formulation for acidifying the rice. The recipe must contain the weights of rice and water needed prior to cooking. The recipe must be validated by a food laboratory to show that it results in cooked rice that has a target pH of 4.1. Any change in the recipe would require lab validation of the new recipe before it may be used. For example, switching to a new brand of vinegar is a significant change and necessitates the revalidation of the recipe.
- ❑ Cooked rice must be cooled in a shallow container that is less than 4" deep to promote rapid cooling of product and uniform acidification.
- ❑ One of the CCPs must be the pH of the cooked rice. A calibrated pH meter or pH test strips must be used, according to manufacturer's instructions, to monitor the pH of every batch of

acidified rice. The pH strips must be able to detect 0.1 unit differences in pH. The target pH should be 4.1 but must not exceed 4.6.

- The results of the pH measurement of each batch of rice must be properly recorded, and the records must be retained for 30 days.