



## SUSHI SAFETY

*Ready-to-eat sushi is considered a potentially hazardous food. The nature and preparation of sushi can create an increased safety risk – these food safety precautions must be taken to ensure consumer safety.*

### Parasite Destruction for Raw Fish

Certain types of raw fish may contain parasites that could infect consumers when consumed.

To ensure safety of raw fish before serving follow these tips:

- **Freeze raw fish** to destroy **parasites** at temperatures of **-20°C or below for 7 days or -35°C or below for 15 hours or -35°C until frozen and held at -20°C for 24 hours**. This procedure is required to destroy the naturally occurring parasites in fish. Freezing may be done by the supplier or the retailer prior to serving a raw ready-to-eat food – however **the retailer has the responsibility to ensure the safety of food served to the customer**.
- When purchasing frozen fish, request written documentation from the supplier to ensure that it meets the parasite reduction freezing requirement.
- Larger species of tuna are **exempt** from the freezing requirement.

Species that do not require freezing are:

- Albacore tuna
- Bluefin tuna
- Yellowfin tuna or ahi
- Bigeye tuna
- Blackfin tuna
- Bluefin tuna, northern



### Control Measures for Sushi Rice

Cooked sushi rice is considered a potentially hazardous food, and must be controlled by one of these methods:

1. Un-acidified sushi rice, once cooled below 60°C must be used within two (2) hours, then discarded, *OR*
2. Un-acidified sushi rice, once cooled to at or below 4°C, must be held refrigerated and leftovers are discarded at the end of the day, *OR*
3. Un-acidified sushi rice, once cooked is held at or above 60°C, leftovers are discarded at the end of the day, *OR*
4. Sushi rice, once **acidified to a pH of 4.2 or below** can be held at room temperature, and leftovers are discarded at the end of the day.

### Acidification of Sushi Rice

Proper preparation of acidified rice:

- The addition of a vinegar solution (acidification) is needed to ensure the pH of sushi rice (white or brown) is less than 4.2 to inhibit bacterial growth.
- Acidification should occur as soon as the rice is cooked.
- The pH for a recipe should be checked to ensure the recipe is effective in lowering the pH to 4.2 or less.
- Rice should be made fresh daily and discarded at the end of the day.
- The rice is cooled in shallow containers.
- Acidified rice should be stored covered when not in use.



### Tips for checking rice acidification in sushi rice

- Record the volumes of vinegar used in your sushi rice recipe and validate the acidity (pH) of each different recipe that is used.
- The most accurate method of checking sushi rice will be to use a pH meter. If you do not have a pH meter, operators should validate the pH by submitting a sample of sushi rice to an accredited laboratory. Validation of the acidity must show an accuracy of the pH test to within  $\pm 0.01$  pH units.
- Check the pH of your sushi recipe (known as a verification step) using either your own pH meter or short-range pH test paper that has an accuracy of  $\pm 0.2$  to  $\pm 0.3$  pH units (this is pH paper that measures between pH3 to pH5, for e.g., one brand is Hydrion MicroFine 2.9 to 5.2).
- After the sushi rice is made, transfer a small portion (about a teaspoon) to a clean dish and mash it slightly before checking with the pH paper. If you are using a pH meter, follow the manufacturer's instructions on using this equipment.

### Proper Food Handling and Hygiene

Sushi preparation involves extensive food handling and as most sushi is consumed raw this increases the food safety risks associated with sushi. Many disease outbreaks linked to sushi are caused by improper food handling. To ensure proper food handling, remember:

- When preparing sushi, a sushi chef should not be engaged in any other food preparation or business activities.
- Wash hands prior to preparing sushi and after using the toilet, smoking, eating and touching non-food items.
- Wash hands between handling of raw and ready-to-eat ingredients.
- People who are sick with vomiting, diarrhea or fever must not prepare food.
- Use only clean and sanitized equipment.
- Ensure separate cutting boards and utensils are used for raw and ready-to eat product.
- Keep all potentially hazardous foods under refrigeration until use.
- Defrost foods in the refrigerator. Seafood, in particular tuna and other scombroid fish at risk of histamine formation, should be defrosted in the refrigerator (DO NOT leave out overnight at room temperature).