**Sanitizing with Bleach Solutions**

A number of factors influence the effectiveness of any chemical sanitizer. They are:

**Contact**
In order to lower the number of microorganisms to an acceptable level, the sanitizing solution must make contact with the surface or the utensil for the amount of time required by the state or local regulatory authority.

**Selectivity**
All sanitizers may not reduce the number of certain microorganisms to an acceptable level.

**Concentration**
The concentration of the sanitizing solution is a critical factor. In the case of chlorine bleach, the FDA Model Food Code recommends a concentration of 25-100 ppm (parts per million) depending on the job to be done, the temperature of the water and the pH of the solution. Concentrations higher than necessary can create **a safety hazard**, cause taste and odor problems corrode metals and other materials and leave residues. The effectiveness of a chlorine bleach sanitizing solution diminishes with use. Therefore it is necessary to test the sanitizing solution using **test strips**. These are readily available from foodservice supply houses.

**Temperature**
Chlorine sanitizing solutions should be at a minimum temperature of 75°F. They are less effective at lower temperatures. At temperatures higher than 120°F chlorine may evaporate from the solution and corrode certain metals. In general, all sanitizers work best at temperatures between 75° and 120°F.

**To Sanitize Work Surfaces**

* After each use, thoroughly wash with hot water and soap/detergent and rinse with warm water.
* Use a sanitizing solution of 1 teaspoon of liquid chlorine bleach to one gallon of warm water (at least 75°F) (200 ppm solution) with clean wiping cloth. (Note: solution should be changed often). Wiping cloths should be kept in the sanitizing solution.
* Air dry.

**To Sanitize Dishes, Glassware, Utensils, Pots and Pans**

* Wash thoroughly in warm water and soap/detergent.
* Rinse thoroughly in warm water.
* Soap/detergent residue and organic matter (food/soil) even in small amounts reduces the effectiveness of the sanitizing solution.
* Immerse in a solution of one teaspoon of liquid chlorine bleach to one gallon of water for at least one minute (60 seconds).
* Air dry.

**To Sanitize Dishtowels, Dishcloths and Wiping Towels**

*In the sink*

* Fill sink with warm water and appropriate amount of laundry detergent.
* Add one teaspoon of liquid chlorine bleach for each gallon of water.
* Swish around.
* Rinse in warm water
* Air dry.

*In the washing machine*

* Wash in washing machine with laundry detergent/soap and one cup of
liquid chlorine bleach.
* Always thoroughly mix with water as directed before using.
* Do not allow undiluted liquid chlorine bleach to come in contact with any fabric (If it does, rinse out immediately with clear, cold water)
* Do not use on steel, aluminum, silver or chipped enamel.

**CAUTION
LIQUID CHLORINE BLEACH IS CONFERRED HAZARDOUS SUBSTANCE AND
THE FOLLOWING PRECAUTIONS SHOULD BE TAKEN IN FOOD AND NUTRITION LABS**

For more information on the use of liquid chlorine bleach as a sanitizer contact The Clorox Company, Consumer Services Department, PO Box 24305, Oakland, CA 94623 or call their hotline at 1-800-292-2200.

From the University of Rhode Island, 01/01

http://web.uri.edu/foodsafety/sanitizing-solutions/