

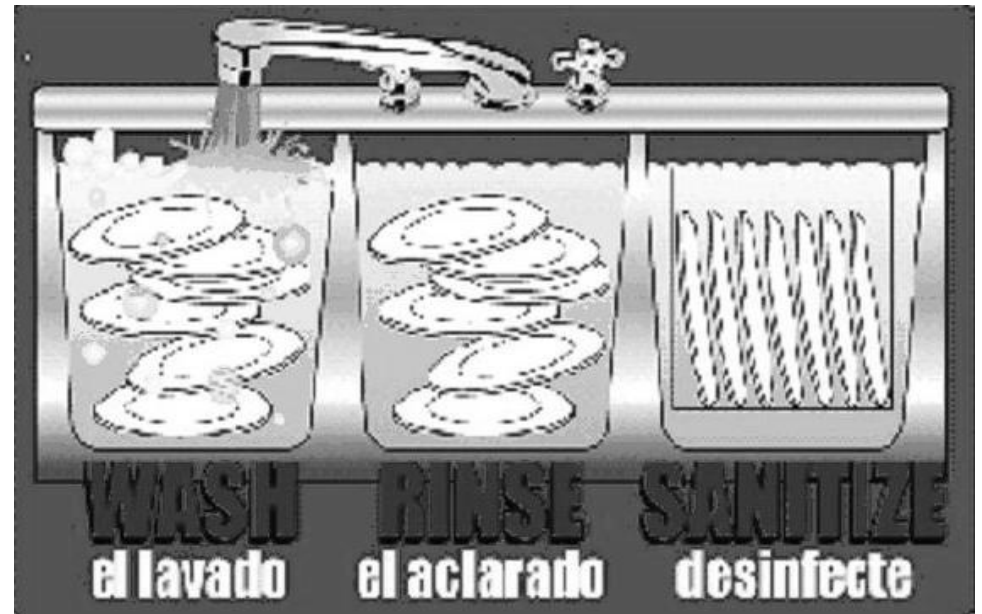
# Manual Warewashing of Equipment & Utensils

## Chemical Sanitation, Temperature, pH, Concentration & Hardness

A chlorine solution shall have a minimum temperature based on the concentration and pH of the solution as listed in the following chart:

Minimum Concentration	Minimum Temperature		Times
	pH 10 or less °F	pH 8 or less °F	
25 ppm	120	120	10 seconds
50	100	75	7 seconds
100	55	55	3 seconds

An iodine solution shall have a minimum temperature of seventy-five (75) °F and a pH of five (5.0) or a pH no higher than the level for which the manufacturer specifies the solution is effective and concentration between twelve and one-half ppm (12.5) and twenty-five (25) ppm.



A quaternary ammonium shall have a minimum temperature of seventy-five (75) °F and have a concentration as indicated by the manufacturer's directions and be used in water with five hundred (500) ppm hardness or less in water having a hardness no greater than specified on the label.

**If necessary for effective cleaning, utensils and equipment should be preflushed, presoaked or scrubbed with abrasives. After cleaning and sanitizing, the equipment and utensils shall be air-dried or used after adequate draining. Equipment and utensils may not be cloth dried except that utensils that have been air-dried may be polished with cloths that are maintained clean dry.**