



Healthy People



Public Health
Prevent. Promote. Protect.

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Healthy Communities

A: The FDA Food Code in section 4-501.114 covers chemical sanitization. It specifically references three types of chemicals: chlorine, iodine, and quaternary ammonium.

- Iodine solution shall have a minimum temperature of 68°F, pH of 5.0 or less or a pH no higher than the level for which the manufacturer specifies the solution is effective, and concentration between 12.5 MG/L and 25 MG/L.
- A quaternary ammonium compound solution shall have a minimum temperature of 75°F and have a concentration as specified under § 7-204.11 and as indicated by the manufacturer's use directions included in the labeling.
- A chlorine solution shall have a minimum temperature based on the concentration and PH of the solution as listed in the following chart. You will have to review their most recent water test to determine the pH of the water.

CONCENTRATION RANGE (MG/L)	MINIMUM TEMPERATURE PH 10 OR LESS °C (°F)	MINIMUM TEMPERATURE PH 8 OR LESS °C (°F)
25 - 49	49 (120)	49 (120)
50 - 99	38 (100)	24 (75)
100	13 (55)	13 (55)

- If a chemical sanitizer other than chlorine, iodine, or a quaternary ammonium compound is used, it shall be applied in accordance with the EPA-registered label use instructions.

D. Critical Limits for CLEANING AND SANITIZING OF FOOD CONTACT SURFACES

► Cleaning and Sanitizing Procedures / Critical Limits

► Sanitation: Concentration, pH, Temperature, Hardness and Contact Time

Minimum Concentration (ppm or mg/L)	pH ≤ 10.0 and Minimum Temperature	pH ≤ 8.0 and Minimum Temperature	Contact Time
Chlorine 25	120°F (49°C)	120°F (49°C)	≥ 10 seconds
Chlorine 50	100°F (38°C)	75°F (24°C)	≥ 7 seconds
Chlorine 100	55°F (13°C)	55°F (13°C)	≥ 10 seconds
Iodine ≥ 12.5 to 25	pH ≤ 5.0 or per label; 75°F (24°C)		≥ 30 seconds
Quaternary Ammonium (per label)	water hardness ≤ 500 ppm or mg/L or per label; ≥ 75°F (24°C)		
Hot Water Sanitize 3 compartment sink w/ Integral heating device	≥ 171°F (77°C) immersed in rack or basket		

NOTE: All chemical sanitizers shall be listed in 21 CFR 178.1010 Sanitizing Solutions and used in accordance with EPA-approved manufacturer's label use instructions

► Warewashing: Mechanical and Manual

WAREWASHING MECHANICAL & MANUAL		Minimum Wash Temperature	Minimum Sanitizing Temperature
SPRAY TYPE WAREWASHERS Single Tank, Hot Water Sanitize	Stationary rack, single temperature	165°F (74°C)	165°F (74°C)
	Stationary rack dual temperature	150°F (66°C)	180°F (82°C)
	Conveyor, dual temperature	160°F (71°C)	
Multi-tank, Hot Water Sanitize	Conveyor, multi temperature	150°F (66°C)	Sanitization levels as stated in the above table or per labeled manufacturer's instructions on the container
Chemical Sanitize	Any warewashing machine	120°F (49°C)	
3 Compartment Sink	Cleaning agent labeling may permit lower washing temperatures	110°F (43°C)	