



PARAMETER	How Often To Test	Regulation Requirement	Recommended	If Too High...	How To Lower...	If Too Low...	How To Raise...
pH	Prior to swimmers being admitted to pool, and at 3hour intervals during operation	7.2-7.8	7.4-7.6	Decreases the disinfecting ability Eye/skin irritation Scaling problems	Add muriatic acid (slug in columns in deep end) or add sodium bisulfate	Eye/skin irritation Corrosion problems	Add sodium carbonate (dissolve in bucket of water, first then add)
Free Available Chlorine							
-Temp ≤30°C	Prior to swimmers being admitted to pool, and at 3hour intervals during operation	2.0ppm	2.0 - 3.0ppm	Eye/skin irritation	Dilute with fresh water or, add sodium thiosulfate	Unsafe swimming conditions (pathogen and/or algae growth)	Increase chlorine disinfectant rate
-Temp ≥30°C		3.0ppm	3.0 - 5.0ppm				
Bromine							
-Temp ≤30°C	Prior to swimmers being admitted to pool, and at 3hour intervals during operation	3.0ppm	3.0 – 5.0ppm	Eye/skin irritation	Dilute with fresh water or, add sodium thiosulfate	Unsafe swimming conditions (pathogen and/or algae growth)	Increase bromine disinfectant rate
-Temp ≥30°C		4.0ppm	4.0 – 5.0ppm				
Combined Available Chlorine (CAC)	Prior to swimmers being admitted to pool, and at 3hour intervals during operation	Not more than 50% of the total chlorine residual ≤ 1ppm	≤ 0.5ppm	Heavy chlorine odour Eye/skin irritation	Super chlorinate pool (raise FAC level to 10-20ppm and wait for FAC to drop to normal operating range)	-	-
Total Alkalinity	Weekly	80 - 120ppm	80 – 120ppm	Scale/cloudy residue formation (water clarity issue) Hard to change pH	Add muriatic acid or sodium bisulfate Slug acid in columns in deep end of pool	pH fluctuates Corrosion problems Eye/skin irritation	Add sodium bicarbonate (baking soda) Dissolve in bucket of water before adding This also raises the pH
Cyanuric Acid (outdoor hot tubs & pools)	Weekly	25 – 50ppm	25 – 50ppm	Causes “chlorine lock” which decreases disinfecting power Algae growth	Dilute with fresh water or drain and refill	Excessive chlorine demand (outdoor pools/hot tubs only)	Add cyanuric acid or switch to stabilized chlorine (dichlor or trichlor)
Calcium Hardness	Weekly	125 – 275ppm	180 – 220ppm	Scale/cloudy residue formation (water clarity issue)	Add chelating agent or dilute with soft water	Corrosion problems Pitting in cement pools	Add calcium chloride
Total Dissolved Solids	Monthly	≤2500ppm	200 – 800ppm	Cloudy and/or discolored water	Dilute with fresh water or drain and refill	-	-
Temperature							
-Pool	Twice Daily	≤ 30°C (86°F)	≤ 30°C (86°F)	Unsafe swimming conditions	Adjust heater setting	-	Adjust heater setting
-Hot Tub		≤ 40°C (104°F)	≤ 40°C (104°F)				
Turnover Period							
-Pool	Twice Daily	Every 6 hours (4 times per day)	Every 6 hours (4 times per day)	N/A	Decrease Circulation Rate	Turbidity Issues Disinfection Issues	Increase Circulation Rate
-Hot tub/whirlpool ≤3800L		Every 20 minutes	Every 20 minutes				
-Hot tub/whirlpool ≥3800L		Every 30 minutes	Every 30 minutes				