

STANDARDS FOR CHEMICAL LEVELS
IN SWIMMING POOLS/ SPAS/ WADING POOLS/ SPRAY GROUNDS

Chemicals	Minimum	Maximum	Ideal
Free Chlorine (FC) residual	1.0 ppm (spa/wading/spray 3.0 ppm)	10.0 ppm	2.0 – 3.0 ppm
FC w/ CYA (stabilizer or conditioner)	2.0 ppm (spa/wading/spray 3.0 ppm)	10.0 ppm	2.5 – 3.5 ppm
Bromine*	2.0 ppm (spa/wading/spray 4.0 ppm)	None	4.5 – 6.5 ppm
pH	7.2	7.8	7.4-7.6
Cyanuric Acid (CYA)	0	100 ppm	30 - 50 ppm
Spa temperature	None	104 °F	

REMINDERS:

- Testing frequency for pools and spas are dictated by health codes. The operator must meet or exceed the minimum daily requirements (except complexes with fewer than 25 units may test at least twice per week with no more than 4 days between readings) for testing based on conditions of use and environment. Excessive or heavy user loads may require testing every hour or two.
- Disinfectant (sanitizer levels), pH and Spa temperature must be tested minimum once daily since these tests have a direct bearing on the safety of the patrons and facility.
- Samples for testing should be taken from a depth of at least 18 inches below the water surface and from a location well away from any return inlets.
- When adding reagent drops to the sample, hold the dropper bottle straight up in vertical position to ensure the correct drop size and to get accurate test results.
- The reagents and the sample water must be properly mixed (at least 40X) to reach the end point. If using titration method, the sample must be swirled after each drop of titrant; the end point (color change) must be permanent and not fade back towards the previous color.
- When using color block comparator always hold comparator at eye level to the northern horizon to match sample color to standard comparator. Do not test with fluorescent light as the source.
- Test kits must be protected from heat, light and exposure to chemical fumes and debris. (Colored reagents or those stored in brown bottles have shorter shelf life). Discard and replace reagents if there is any change in color, appearance of suspended material or with expired dates.
- Care should be taken in handling and storing of all chemicals. They should be stored separately and should never be mixed in order to prevent harmful chemical reactions from occurring (pool chlorine and pool acid if mixed together will produce chlorine gas, which if inhaled could be fatal) Never mix Calcium hypochlorite with Trichlor, it will cause an explosion.
- Remember to always follow manufacturer's instructions when using any chemicals. Always add chemicals to water not the other way around.

NOTE: *If you want balanced pool water, other chemicals such as Total Alkalinity (80-180 ppm), Calcium Hardness (150-1000 ppm), and Total Dissolved Solids (300-1500 ppm) must be checked as well and maintained within the recommended range. If you have an ORP Meter maintain reading @ 720 to 750 mV (ideal), or **follow manufacturer's instructions**.*

*for testing Bromine using K-2009 FAS-DPD use free chlorine results then multiply by 2.25 correction factor to get the Bromine reading. Check instruction manual for other test kits as some can take the Bromine reading directly.