

TEST DESCRIPTION & RECOMMENDED RANGES

CHLORINE & BROMINE

Chlorine and bromine sanitize pool water by killing over 99% of the bacteria present in the water. They're also effective oxidizers that burn up organic waste such as urine, perspiration and dead bacteria. A weekly shock treatment is required to eliminate weak, ineffective chloramines that are formed during this process.

RECOMMENDED RANGE:

Chlorine: 1.0 to 3.0 ppm / Bromine: 2.0 to 4.0 ppm
WHEN TO TEST:

Twice daily (or as bather load demands)

POTENTIAL PROBLEMS:

- Too low - inadequate sanitation / bacteria & algae growth
- Too high - uneconomical use of sanitizer

POOL & SPA WATER TEST PROCEDURE

CHLORINE / BROMINE TEST

- 1 - Rinse and fill chlorine /bromine cell to mark with water to be tested.
- 2 - Add 5 drops OTO-50. Cap and invert to mix.
- 3 - Match color with color standard. Record as parts per million (ppm) total chlorine or total bromine. For Chlorine: See dosage chart for adjustment. For Bromine: See manufacturer's instructions for adjustment.

When contaminants are introduced into pool water, they react with free chlorine to produce combined chlorine or chloramines. Combined chlorine is less effective than free chlorine, usually has a foul smell, and is an eye irritant. A shock treatment or superchlorination can increase free chlorine.

pH

pH is a measurement of the relative acidity or basicity of pool water. 7 is neutral and pool water should be slightly basic (7.2 - 7.6). A low pH can cause corrosion and skin and eye irritation. A high pH can cause scale formation and reduce the effectiveness of chlorine. Maintaining a proper pH helps ensure bather comfort and maximizes the effectiveness of your chemicals.

RECOMMENDED RANGE:

pH: 7.2 to 7.6
WHEN TO TEST:

Daily

POTENTIAL PROBLEMS:

- Too low - corrodes surfaces / irritates eyes and skin
- Too high - scale deposits / cloudy water / poor sanitizer efficiency

TOTAL ALKALINITY

Total alkalinity is a measurement of all the alkaline materials in your pool water. These act as buffering agents, neutralizing acids and bases to help prevent a condition known as " pH bounce" which can cause corrosion and scale formation. Maintaining proper alkalinity is the best way to save on corrective chemicals.

RECOMMENDED RANGE:

Total alkalinity: 80 to 120 ppm
WHEN TO TEST:

Weekly

POTENTIAL PROBLEMS:

- Too low - pH difficult to maintain / corrosion tendency
- Too high - pH difficult to adjust / potential for scaling

TOTAL ALKALINITY TEST

- 1 - Rinse and fill sample tube to 25ml mark with water to be tested.
- 2 - Add 2 drops ALK-10. Swirl to mix.
- 3 - Add 5 drops ALK-20. Swirl to mix. Sample should turn green
- 4 - Add ALK-30 dropwise. After each drop, count and swirl to mix until color changes from green to red.
- 5 - Multiply drops in step 4 by 10. Record as parts per million (ppm) total alkalinity as calcium carbonate. See dosage chart for adjustment.

ACID DEMAND TEST

- 1 - Use treated sample from pH test.
- 2 - Add AD-40 dropwise. After each drop, count, mix, and compare with color standards until desired pH is matched. See dosage chart to continue.

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pH DOSAGE CHART

Volume of Water (liter)	FROM 6.5
1000	1.2 oz
1500	2.0 oz
5,000	4.9 oz
20,000	1.5 lbs
40,000	3.1 lbs
60,000	4.6 lbs
75,000	6.2 lbs

ALKALINITY DOSAGE CHART

Volume of Water (liter)	ppm
1000	17 g
1500	25 g
5,000	84 g
20,000	336 g
40,000	671 g
60,000	1.01 kg
75,000	1.26 kg

REMEMBER!

- 1 - Keep test kit out of reach of children
- 2 - Read precautions on all labels.
- 3 - Store test kit in a cool, dark place.
- 4 - Replace solutions once each year.
- 5 - Do not dispose of solutions in pool or spa.
- 6 - Rinse cells before and after each test.
- 7 - Obtain samples 45cm/18" below water surface.
- 8 - Hold bottle vertically when dispensing.

CHI ORINE DOSAGE CHART

pH TO 7.5 ODA ASH IONATE 100%)**	FROM 6.5
M 6.8	1.2 oz
	36 g
	2.0 oz
	56 g
	4.9 oz
	184 g
	1.5 lbs
	719 g
	3.1 lbs
	1.49 kg
	4.6 lbs
	2.21 kg
	6.2 lbs
	2.79 kg

ALKALINITY ODA ASH IONATE 100%)	ppm
	17 g
	25 g
	84 g
	336 g
	671 g
	1.01 kg
	1.26 kg