



## 5 Key Swimming Pool Water Test Parameters.

These are the 5 parameters you and your pool require to know and understand, so as to maintain your pool in tip top condition.

### 1. pH (Potential Hydrogen)

- **What it represents:** pH measures how acidic or alkaline the pool water is, on a scale from 0 to 14. A pH level of 7.0 is neutral, below 7.0 is acidic, and above 7.0 is alkaline.
- **Ideal range:** 7.2 to 7.8 for pool water.
- **Why it matters:**
  - **Bather comfort:** If pH is too low, the water can become irritating to eyes and skin. If too high, it can cause discomfort as well.
  - **Chlorine efficiency:** Chlorine works best within the ideal pH range. If pH is too high or too low, it reduces chlorine's ability to disinfect the water effectively.
  - **Equipment protection:** Extreme pH levels can cause corrosion (low pH) or scaling (high pH) of pool surfaces and equipment.

### 2. Chlorine (Sanitiser)

- **What it represents:** Chlorine is a chemical used to kill bacteria, viruses, and algae in pool water. It comes in free chlorine (the active sanitiser) and combined chlorine (which has already reacted with contaminants).
- **Ideal range:** 1.0 to 3.0 parts per million (ppm).
- **Why it matters:**
  - **Water sanitation:** Proper chlorine levels help maintain clear, germ-free water, preventing recreational water illnesses.
  - **Algae control:** Sufficient chlorine helps prevent the growth of algae, keeping the pool visually appealing and safe.
  - **Odour control:** Low free chlorine and high combined chlorine can result in that unpleasant "chlorine smell," signalling that the water needs more sanitiser.
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### 3. Total Alkalinity (TA)

- **What it represents:** Total Alkalinity measures the concentration of alkaline substances (mostly bicarbonates) in pool water. It acts as a buffer for pH changes.
- **Ideal range:** 80 to 120 ppm.
- **Why it matters:**
  - **pH stability:** TA helps prevent rapid fluctuations in pH (pH "bounce"), keeping it stable over time.
  - **Prevents damage:** When TA is too low, pH can swing drastically, potentially causing damage to pool surfaces and equipment. Too high, and it can lead to cloudy water and scaling.
  - **Overall balance:** Proper TA helps keep the pH in check, contributing to overall water balance.

### 4. Calcium Hardness (CH)

- **What it represents:** Calcium Hardness refers to the amount of dissolved calcium in pool water.
- **Ideal range:** 200 to 400 ppm.
- **Why it matters:**
  - **Preventing corrosion:** Low calcium levels can cause the water to become aggressive, leading to corrosion of metal parts and etching of plaster surfaces.
  - **Avoiding scaling:** High calcium levels can cause scale formation on pool surfaces and equipment, affecting performance and appearance.
  - **Maintaining structural integrity:** Balanced calcium hardness is essential to prevent damage to pool materials and prolong their lifespan.

### 5. Stabiliser (Cyanuric Acid, CYA)

- **What it represents:** Cyanuric Acid (CYA) is a chemical that protects chlorine from being degraded too quickly by sunlight.
- **Ideal range:** 30 to 50 ppm for outdoor pools.
- **Why it matters:**
  - **Chlorine efficiency:** Without CYA, chlorine can break down too quickly in sunlight, reducing its ability to sanitise the water.
  - **Cost efficiency:** Proper stabiliser levels help chlorine last longer, reducing the need for frequent additions.
  - **Balance considerations:** While CYA is beneficial, too much can reduce chlorine's effectiveness, so it's important to maintain the proper level.
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## Langelier Saturation Index (LSI)

- **What it represents:** The LSI is a calculated value that measures the overall balance of your pool water, taking into account pH, Total Alkalinity, Calcium Hardness, Water Temperature, and Total Dissolved Solids (TDS).
- **Why it matters:**
  - **Water balance assessment:** LSI provides a single number to assess whether the water is corrosive (tending to dissolve materials) or scale-forming (leaving deposits). A balanced LSI ensures water is neither too aggressive nor too prone to scaling.
  - **Longevity of pool surfaces:** Keeping LSI balanced helps prevent both scaling and corrosion, protecting your pool's surfaces and equipment.
  - **Overall health:** By monitoring the LSI, you can maintain the pool's water chemistry in harmony, creating a healthier, safer, and more efficient pool environment.

Understanding these five key parameters and regularly testing them ensures that your pool water stays balanced, clear, and safe for swimmers, while also protecting the longevity of your pool's equipment and surfaces.

## How Often To Test?

Ideally these should be on a regular basis either at the pool shop or when the pool technician visits. Alternatively with the correct testing kit you can do these as well.

Generally, at least every 2 weeks in summer (And weekly when pool being used) Party use then daily even, but before the pool party, to make sure it's healthy.

In the winter usually monthly is frequent enough. Don't neglect it in winter as can get out of balance, create issue that are unseen and then costly to sort out in the spring. It's far cheaper to monitor even through the winter.

Whatever pool testing regime you are using make sure the records are **kept long term** as this assists with better long term pool care.

Testing yourself: then a Taylor's Kit is a great place to start.

**K 2005 Complete** or **K 2005 Salt** if you have a salt pool.

<https://taylortechnologies.com/>

Also see "**Got A Salt Water Chlorinated Pool?**" above

