

AquaChek TruTest

Analyzing Test Results and Adjusting Pool Water



www.AquaChek.com/TruTest
1-888-AquaChek

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To keep your pool at its best, test at each end a minimum of twice a week, and test your spa before each use.

Free Chlorine – Ideal Reading: Pool 1.0 – 3.0 ppm; Spa 3.0 – 5.0 ppm

To maintain a clean and clear pool, keep the free chlorine level in the right range. Free chlorine is the portion of the total chlorine remaining in chlorinated water that has not reacted to contaminants – and is “free” to go to work to kill bacteria and other contaminants.

Shock Treatment – Contrary to popular belief, a strong chlorine smell is not an indication of too much chlorine in the pool but actually a red flag that a super dose of chlorine may be required to correct the problem. Shock treatment adds a larger-than-normal amount of oxidizing chemicals to pool water. The ideal frequency for a super dose is every week, depending on use and water temperature.

Bromine – Ideal Reading: 2.0 – 6.0 ppm

To obtain bromine result, multiply free chlorine value by 2.2. Bromine is a popular pool and spa sanitizer often used instead of chlorine. Environmental conditions (leaves, rain) and usage (how many folks are enjoying the pool or spa) will add contaminants in the water. Those contaminants will decrease the bromine existing in the water. Be sure to test the bromine before entering the water. Even if the system is dormant or not in use, you should test the bromine level at least weekly to prevent any buildup of bacteria or algae.

pH – Ideal Reading: 7.2 – 7.8

Losing control of pH in the water unleashes a whole series of problems. The pH can damage metal equipment and plaster walls if it gets out of balance. A swimmer's body has a pH between 7.2 and 7.8 so, if the pool water isn't kept in this range, swimmers will start to feel irritation of their eyes and skin. Finally, the pH must stay in the proper range to maximize the efficiency of chlorine.

If the pH is low, below 7.2, the water is too acidic and it can damage the piping and pool surfaces under certain conditions. You can use sodium carbonate (soda ash) to increase pH when levels are too low. Other chemicals that can raise the pH are sodium bicarbonate and sodium sesquicarbonate.

Above 7.8, the water is more alkaline (basic) and under certain conditions can form deposits in the piping and on pool surfaces. Sodium bisulfate and muriatic acid can lower the pH when it gets too high.

Total Alkalinity – Ideal Reading: 80 – 120 ppm

Total alkalinity is the measure of the water's ability to resist pH change. If the total alkalinity is low, the pH will fluctuate widely and be difficult to maintain. When total alkalinity is high, the pH can become difficult to move and the water can be scale forming.

Increasing Total Alkalinity – Sodium bicarbonate is the most effective and popular chemical for increasing total alkalinity. Other chemicals that can raise the total alkalinity are sodium carbonate (soda ash) and sodium sesquicarbonate.

Decreasing Total Alkalinity – When the total alkalinity is too high, you can lower it by using muriatic acid or sodium bisulfate.

Type of Chlorine	Pool Volume			
	5,000 gal.	10,000 gal.	15,000 gal.	25,000 gal.
Sodium Hypochlorite	1 3/4 qts.	3 1/4 qts.	1 1/4 gal.	2 gal.
Dichlor	11 oz.	1 1/3 lbs.	2 lbs.	3 1/3 lbs.
Calcium Hypochlorite	311 g	605 g	908 g	1,5 kg

Type of Chlorine	Spa Volume		Type of Chlorine	Spa Volume	
	250 gal.	500 gal.		250 gal.	500 gal.
Dichlor	1/4 oz.	1/2 oz.	Dichlor	2/3 oz.	1 1/4 oz.
Sodium Hypochlorite	1 oz.	2 oz.	Sodium Hypochlorite	7/4 ml.	1 1/2 oz.
Lithium Hypochlorite	1/2 oz.	1 oz.	Lithium Hypochlorite	1 oz.	2 oz.

See warnings for handling chemicals* ppm=mg/L

pH Level	Pool Volume			
	1,000 gal.	5,000 gal.	10,000 gal.	15,000 gal.
7.0 - 7.2	3/4 oz.	3 1/2 oz.	7 1/2 oz.	11 1/4 lbs.
6.7 - 7.0	1 1/4 oz.	6 oz.	12 oz.	2 lbs.
Under 6.7	42.5 g	227 g	454 g	681 g

*WARNING: Exercise extreme caution when handling chemicals. Never store acids and chlorine compounds next to each other. Never mix chemicals together, add chemicals to the water one at a time. Handle acid very carefully. Wear protective eyewear and keep material away from children. Always follow the chemical manufacturer's directions.

pH Level	Pool Volume			
	1,000 gal.	5,000 gal.	10,000 gal.	15,000 gal.
7.8 - 8.0	3.8 kl.	19 kl.	38 kl.	57 kl.
8.0 - 8.4	0.1 lb.	0.5 lb.	1 lb.	1.5 lb.
Over 8.4	136 g	363 g	681 g	1 kg

Increase in Total Alkalinity in ppm	Pool Volume			
	1,000 gal.	5,000 gal.	10,000 gal.	15,000 gal.
10	2 1/2 oz.	12 oz.	1 1/2 lbs.	2 1/4 lbs.
20	4 3/4 oz.	1 1/2 lbs.	3 lbs.	4 1/2 lbs.
50	12 oz.	3 3/4 lbs.	7 1/2 lbs.	11 1/4 lbs.

Decrease in Total Alkalinity in ppm	Pool Volume			
	1,000 gal.	5,000 gal.	10,000 gal.	15,000 gal.
10	2 1/2 oz.	12 3/4 oz.	1 1/2 lbs.	2 1/2 lbs.
20	5 oz.	1 1/2 lbs.	3 1/4 lbs.	4 3/4 lbs.
50	14 1/2 oz.	4 lbs.	8 lbs.	12 lbs.

*WARNING: Exercise extreme caution when handling chemicals. Do not add chemicals when swimmers are in the water. Never store acids and chlorine compounds next to each other. Never mix chemicals together, add chemicals to the water one at a time. Handle acid very carefully. Wear protective eyewear and keep material away from children. Always follow the chemical manufacturer's directions.

Troubleshooting Guide

Optimal Levels

	Ideal Reading
Free Chlorine – Pool	1.0 - 3.0 ppm
Free Chlorine – Hot Tub	3.0 - 5.0 ppm
Bromine	2.0 - 6.0 ppm
pH	7.2 - 7.8
Total Alkalinity	80 - 120 ppm

If the problem is...

Algae

Possible Cause	Solution
Green, black or pink algae	Treat with algicide or superchlorinate and backwash.
Yellow/mustard algae	Superchlorinate or treat with algicide. Brush and vacuum required. Backwash filter.

Corrosion

Possible Cause	Solution
Low pH or hardness levels	Increase levels to balance water.
High salt or TDS concentrations	Add fresh water to dilute.
High chlorine or bromine levels for extended period of time	Remove source of sanitizer and allow level to drop. Add fresh water to dilute if necessary.

Foul Odor

Possible Cause	Solution
Foul chlorine odor/chloramine level is too high	Shock to eliminate combined chlorine.
Rotten egg smell: excess metals present	Add sequestering agent to reduce metal level.

Foam on the Water

Possible Cause	Solution
Hardness too low	Adjust up.
Some algaecides produce foam	See manufacturer's directions.
Source unknown	Add defoamer.

Cloudy Water

Possible Cause	Solution
High pH, alkalinity, calcium or TDS can contribute to cloudy water	Reduce levels or add fresh water to dilute.
Reduced filtration	Check for blockage and clean traps.
Heavy bather load	You may need to superchlorinate.

Unable to Maintain Free Chlorine (or other primary sanitizer)

Possible Cause	Solution
High TDS or pH	Reduce levels or add fresh water to dilute.
High combined chlorine level	Superchlorinate. (May require double dose or more.)
Sunlight dissipating chlorine	Add cyanuric acid (stabilizer).
Heavy bather loads	Increase sanitizer distribution.
High nitrate level increases chlorine demand	Add fresh water to dilute.

Colored Water

Possible Cause	Solution
Green algae growth, low free chlorine, or high nitrate level	Treat with algicide and/or superchlorinate.
Insufficient free chlorine content	Maintain an ideal level of free chlorine. Increase dosage if necessary.
Leaves, pollen or other organic waste frequently enters pool system	Keep covered when possible during peak times of contamination.
High phosphate levels	You can add a phosphate control chemical.

AquaChek TruTest Gives No Free Chlorine Reading, but DPD Kit Gives a High Free Chlorine Reading

Possible Cause	Solution
Very high chlorine level (High combined chlorine can cause DPD #1 kits to give false readings for free chlorine.)	The free chlorine reading on your AquaChek meter is correct! This is a common problem at the beginning of the season. Test for total chlorine using AquaChek Select or AquaChek 7. You may need to shock the water.

Scale Buildup

Possible Cause	Solution
Calcium hardness level too high	Add fresh water to dilute.
Total alkalinity, pH or TDS too high	Adjust down or add fresh water to dilute.
Calcium hardness level too low, rough soft water	Increase hardness level.
Scale forms	Increase hardness level.
Metals present in high levels leading to buildup	Add sequestering agent to reduce metal content.

Swimmer/bather Skin and Eye Irritation

Possible Cause	Solution
High or low pH or alkalinity, or both	Maintain pH and alkalinity at ideal levels for optimum swimmer comfort.
High free chlorine level	Remove source and allow level to drop. Add fresh water to dilute if necessary.
High chloramine (combined chlorine) level	Shock (superchlorinate) to remove combined chlorine.

Recurring Algae Growth

Possible Cause	Solution
High nitrate level	Add fresh water to dilute.
Insufficient free chlorine content	Maintain an ideal level of free chlorine. Increase dosage if necessary.
Leaves, pollen or other organic waste frequently enters pool system	Keep covered when possible during peak times of contamination.
High phosphate levels	You can add a phosphate control chemical.

Green Hair

Possible Cause	Solution
Elevated copper in the water	Test copper level. Reduce copper level with a sequestering agent.
Extremely high free chlorine level (around 50 ppm) can bleach hair	If free chlorine level is excessive, keep bathers out of water until level drops.
Cheap shampoo	Find a new hairdresser.

Batteri-instructies

1. Naar de 3,2 display countdown dip en verwijder de strip. Schud het display water drogen.
2. Plaats de strip met de cijfers naar voren in de testkamer. Het display zal de waarde van de strip tonen op het LCD-scherm.
3. Na het lezen van de waarde, verwijder de strip uit de testkamer en gooi deze weg. Het display zal de waarde van de strip tonen op het LCD-scherm.
4. Het display zal de waarde van de strip tonen op het LCD-scherm.

Productgegevens en -informatie
Hukommelsesfunktion (#2, Middelste knop)
Føljemeddelelser

- Als ER2 op het display verschijnt, is er een fout opgetreden bij het lezen van de teststrip. Zorg dat de testprocedure correct wordt uitgevoerd.
- Als ER3 op het display verschijnt, is er geen testresultaat te zien op de teststrip in de verkennende positie geplaatst. De juiste positie is met de bekleding van de teststrip omhoog in de sleuf met de bevestiging van de handgreep tegen de bovenkant.
- Als ER4 op het display verschijnt, is de TA-lus niet op het TruTest-Meter, is de batterijspanning te laag of de batterij is bijna leeg.

Gebruik van teststrips
• Elk strip mag maar eenmaal worden gebruikt. Dompel de strip niet opnieuw onder. Dompel de strip alleen onder in rustige gebieden van een zwembad of bubbelbad.

Verpakking
• Het display moet schoon en droog zijn. Het display moet schoon en droog zijn. Het display moet schoon en droog zijn.

Onderhoud
• Reinig de teststrip regelmatig met schoon water en een katoenen doekje. Hiermee voorkomt u de ophoping van vuil.

Opslag
• Bewaar de meter buiten direct zonlicht om te voorkomen dat de meter door UV-stralen wordt beschadigd.

Let op!
• Als u de meter een aantal maanden niet gaat gebruiken, moet de batterij worden vervangen.

TIP 1! FEJLFINDING
• Het display moet schoon en droog zijn. Het display moet schoon en droog zijn.

TIPS VOOR PROBLEEMOPLOSSINGEN
Als de TruTest-aflezingen hoger of lager zijn dan verwacht, zijn deze verschillen waarschijnlijk te wijten aan de techniek.

Belangrijk:
• Duik Start toegelaten is niet het dippen van de strip.

Wichtig:
• Drukken Sie gleichzeitig auf die Starttaste, wenn Sie den Teststreifen einstecken.

• Schieben Sie den Teststreifen nicht beim Einstecken. Tauchen Sie den Teststreifen einfach ein und nehmen Sie ihn wieder heraus.

• Stellen Sie sicher, dass die Pads auf dem Teststreifen nach unten zeigen, wenn dieser auf das Messgerät gelegt wird.

• Wischen Sie das Messgerät und den Kanal zwischen den Tests sorgfältig ab, wie allen, wenn Sie nachdem mehrere Tests durchführen.

Important! Retain!
**Instructions for use
***Tips/Warranty Information

www.AquaChek.com/TruTest
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Note: Read this instruction manual carefully and keep it available for future reference.

MEMORY FUNCTION (#2, MIDDLE BUTTON)
Press memory button to view your last nine readings.

ERROR MESSAGES
• If ER2 appears on the screen – there is an error in reading the test strip. Ensure that you are following the test procedure correctly. Use only AquaChek TruTest instrument test strips. No other test strip can be used.

• If ER3 appears on the screen – no strip is in place or the test strip is positioned incorrectly. The correct position is with the test pads face down in the slot with the top pad all the way to the top.

• LO BAT on the TruTest Meter display the battery voltage has dropped below the permissible limit. Replace with new batteries.

Test Strip Use
• The AquaChek TruTest test strips are calibrated to work only with the AquaChek TruTest test strip reader.

• Each strip may only be used once. Do not re-dip the strip. Only dip the strip in calm areas of your pool or spa. Do not swim or swirl strip in water.

• Ensure you have a fresh supply – keep cap on tight between uses and store at room temperature.

• A flashing display indicates test result limit.

• Compare the result with the water parameter range recommended per equipment or chemical program

• Treat the water per chemical manufacturer's instructions

• Re-test for confirmation of the result

• Consult with a pool or hot tub professional

For more information on operation of the product, tips on water balance, or to seek customer or technical support, please visit the website, www.aquachek.com.

Instrucciones para la batería

1. Pulse ON para encender la unidad se activará al pulsar el botón. La pantalla indicará "On".
2. Pulse el botón Start para comenzar y sumergir inmediatamente una cinta de análisis. Retire la cinta inmediatamente y séquela para quitar el exceso de agua en un movimiento rápido de la tira. Asegure de seguir correctamente el procedimiento de la prueba. Utilice sólo tiras para pruebas AquaChek TruTest. No pueden usarse otro tipo de tiras.
3. Coloque la punta de la cinta de análisis hasta el fondo del canal, déjela plana con el lado almohadado hacia abajo. NO DEJES LA TIRA DE ANÁLISIS POR EL VENTRO.
4. Abra eople los resultados. (No tenga la cinta sujetada.) Los resultados digitales para Cloro Libre, pH y Alcalinidad total podrán verse en cuestión de segundos. Controle el estado de los resultados para cada uno de los parámetros. El estado LO= Bajo, OK= Ideal, HI= Alto se muestra a la izquierda de cada valor de lectura.

Información de las características del producto
Función Memoria (#2, Botón del medio)

Mensajes de error
• Si aparece ER2 en la pantalla, hay un error en la lectura de la tira. Asegure de seguir correctamente el procedimiento de la prueba. Utilice sólo tiras para pruebas AquaChek TruTest. No pueden usarse otro tipo de tiras.

• Si aparece ER3 en la pantalla, no se ha colocado ninguna tira o está colocada de forma incorrecta. La posición correcta es con la almohadilla boca abajo y con la tira bien encajada en la ranura, haciendo tipo.

• Si aparece LO en la exhibición TA de la pantalla del medidor TruTest, la carga de las pilas está por debajo del límite aceptable. Reemplázalas por pilas nuevas.

Uso de la tira para pruebas
• Las tiras para pruebas AquaChek TruTest están calibradas para funcionar sólo con el lector de tiras AquaChek TruTest.

Mantenimiento
• Limpie la sángr para la tira con agua limpia y un algodón de vez en cuando.

Almacenamiento
• Guarde el medidor fuera de la luz solar directa para protegerlo de los rayos UV.

• Si no va a usar el medidor durante varios meses, quite las baterías.

• Evite que se resque el medidor al agua. Si el medidor cae al agua, quite y seque las baterías y el compartimento para las baterías antes de su uso.

• No use las baterías a la basura. Por favor, recicle. En Europa, recicle el medidor siguiendo la directiva WEEE X de su país.

CONSEJOS PARA SOLUCIONAR PROBLEMAS
Si las lecturas del TruTest son más altas o más bajas que las esperadas, es posible que estas diferencias sean atribuibles a la técnica.

Importante:
• Pulse Start al menos tres veces que sumerge la cinta de análisis.

• No agite ni revuelva la cinta de análisis cuando la sumerge. Sencillamente sumérjala y retírela.

• No deslice la cinta de análisis por el vidrio.

• Asegúrese de que la almohadilla de la cinta está hacia abajo cuando la coloca en el medidor.

• Entre un análisis y otro, limpie completamente el medidor y el canal, especialmente cuando realice varios análisis sucesivamente.

Tiene dos fallos, pulse accuratamente il miovisore e il canale, in particolare modo si si stanno eseguendo diversi test l'uno dopo l'altro.

Instalação das pilhas

1. Pressione o botão ON (Start). LIGAR a unidade premindo o botão de ligar/alimentação elétrica. O visor exibirá o mensagem "On".
2. Pressione o botão Start (iniciar) e mergulhe uma tira no mesmo tempo. Retire imediatamente a tira de análise e sacuda a água em excesso da tira com um simples movimento do dedo.
3. Coloque a ponta da tira com o analítico no fundo do canal, apoiada na horizontal, com a parte almofadada para o lado de trás (ANÁLISE POR EL VENTRO).
4. Abra e mostre os resultados. (Não segure a tira.) Os resultados digitais para Cloro Livre, pH y Alcalinidad total podrán verse en cuestión de segundos. Controle el estado de los resultados para cada uno de los parámetros. El estado LO= Bajo, OK= Ideal, HI= Alto se muestra a la izquierda de cada valor de lectura.

Funcionalidades e informações do produto
Função de Memória (#2, Botão Central)

Mensagens de erro
• Se for exibido ER2 no lugar de um valor numérico – o resultado do teste está fora do intervalo. O parâmetro é muito alto ou muito baixo para ser analisado com precisão. Observe o nível do estado, LO (baixo) ou HI (alto) para determinar como fazer o tratamento da água. Refaça o teste após o tratamento.

• Se for exibido ER3 na tela – não há fio de teste na abertura ou a fita de teste não está posicionada corretamente. A posição correta é a água em que a fita está voltada para baixo na abertura com a sua parte superior coincidindo com a parte superior da abertura.

• Se for exibido ER4 na tela – não há fio de teste na abertura ou a fita de teste não está posicionada corretamente. A posição correta é a água em que a fita está voltada para baixo na abertura com a sua parte superior coincidindo com a parte superior da abertura.

Uso da fita de teste
• As fitas de teste AquaChek TruTest são calibradas para funcionar somente com o leitor de fita de teste AquaChek TruTest.

Mantenimento
• Limpe o equipamento com água limpa e um algodão de vez em quando.

Armazenamento
• Guarde o medidor longe da luz solar direta para protegê-lo dos danos causados pela radiação UV.

• Se não for usar o medidor por alguns meses, remova as pilhas.

• Não use as pilhas a lixo. Por favor, recicle. Na Europa, recicle o medidor seguindo a diretiva WEEE X de seu país.

CONSIGLI PER LA RISOLUZIONE DEI PROBLEMI
Se le misurazioni del TruTest sono più alte o più basse del previsto, è probabile che tali differenze siano causate dalla tecnica impiegata.

Importante:
• Premere Start almeno tre volte prima di immergere la striscia.

• Non girare né scuotere la striscia reattiva durante l'immersione. Immergere semplicemente la striscia e quindi rimuoverla.

• Non sfregare la striscia reattiva lungo il vetro.

• Assicurarsi che i tamponi sulla striscia siano rivolti verso il basso quando sono collocati sopra il dispositivo di mediazione.

• Tra un test e l'altro, pulire accuratamente il miovisore e il canale, in particolare modo se si stanno eseguendo diversi test l'uno dopo l'altro.

• Assicurarsi che la parte imbottita della striscia sia rivolta verso il basso quando la si colloca nel medidor.

