



Test Strips For Aquarium (6-in-1)

Intended Use:

This product can be used for the detection of nitrate (nitrate+nitrite), nitrite, residual chlorine, total hardness, carbonate, and pH in aquariums, aquaculture water, or other water quality (drinking water and its source, well water, surface water, swimming pool water, hot spring water, mineral water, sewage, etc.).

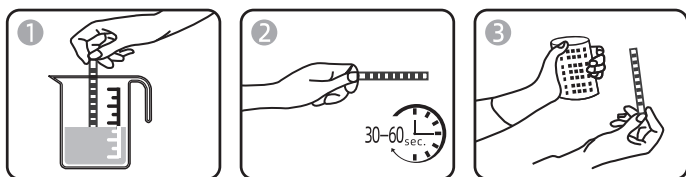
Product Testing Scope

Item	Detection Concentration Range								unit
Nitrate+Nitrite(NO ₃ +NO ₂ -)	0	10	25	50	100	250	500		mg/L
Nitrite(NO ₂ -)	0	1	5	10	25	50	100		
Free Chlorine(OCl ⁻)	0	0.5	1	3	5	10	25	50	
Total Hardness(GH)	0	<6	7	14	21				°d
	0	100	125	250	375				mg/L
Carbonate(KH)	0	3	6	10	15	20			°d
	0	53.5	107	180	270	360			mg/L
pH	6.4	6.8	7.2	7.6	8.0	8.4			

Test Method:

1. Immerse the test strip in the water sample to be tested for 1-2 seconds and remove it.
2. Use absorbent paper to remove excess water from the test strip.
3. Place the test strip reagent block horizontally and compare it with the color chart, and record the results.

Note: Please read the results according to the time given on the color chart.



Reagent Area Information

Nitrite (NO₂) and Nitrate (NO₃)

The decomposition of organic nitrogen compounds from feces, dead plants, food residues or similar takes place in several stages:

1. Ammonia and ammonium are produced from organic waste. Ammonium is taken up by plants as nitrogen fertilizer. Ammonia is highly toxic. The conversion of ammonium or ammonia depends on the pH value. Ammonium is produced at low pH levels. Ammonia is produced at high pH levels. Therefore, there is no risk of ammonia poisoning in an aquarium or garden pond with a low pH value.
2. Nitrite, a substance toxic to fish, is produced from ammonium/ammonia.
3. Nitrite is converted into nitrate. Nitrate is toxic only in high concentrations and is taken up by aquatic plants as a nutrient. The individual decomposition stages are completed by microorganisms. An increased level of nitrite or nitrate indicates that

the biological balance is disturbed. In this case, you should perform a partial water change and investigate the cause.

You can find out the nitrate content by comparing the nitrate measurement of the test strip with the corresponding color. The transition color indicates an intermediate value. The nitrate content should not exceed 25 mg/L. Aquatic plants absorb nitrates as nutrients. Therefore, adequate plant growth prevents excessive nitrate levels.

Free Chlorine

Chlorine is added to tap water regularly for disinfection purposes. Ornamental fish and other aquarium pets cannot survive even very small amounts of chlorine, so it needs to be removed from the water added to the aquarium. Chlorine can be removed from the water by enhanced aeration or activated carbon filtration.

Total Hardness(GH)

When determining general hardness, we measure the calcium and magnesium salts dissolved in the water. Most fish prefer water with medium hardness. However, East African ornamental fish live in water with high hardness.

Carbonate (KH)

Carbonate hardness indicates the pH buffering capacity of water. It stabilizes the pH value. Alkalinity and pH affect each other in terms of their lethal effects on fish. At the same alkalinity, the higher the pH value, the stronger the toxic effect on fish.

pH

The pH value indicates the acidity level of the water. A pH of 7 is neutral. A pH below 7 is acidic, and a pH above 7 is alkaline. Avoid sudden large changes in pH.

It is impossible to give general recommendations for ideal pH values. For example, ornamental fish from South America live in water with an acidic pH below 7, and perch fish from inland lakes in East Africa live in alkaline water with a pH above 7.

Water with a carbonate content below 3 dKH will result in inaccurate pH determinations. This will be very rare in an ordinary aquarium. In this case, adjust the carbonate hardness of the water to be tested to above 3 dKH, and then determine the pH.

Storage conditions and validity period

Sealed storage at 2 °C~30 °C, with a validity period of two years; After opening, close the bottle cap tightly and store at 2 °C~30 °C, with a validity period of three months .

六合一水質測試紙說明書

用途

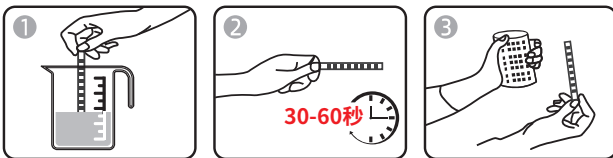
本產品可用於觀賞魚魚缸及水族養殖用水或其它水質（飲用水及其水源、井水、地表水、游泳池水、溫泉水、礦泉水、污水等）中的硝酸鹽（硝酸鹽+亞硝酸鹽）、亞硝酸鹽、餘氯、總硬度、碳酸鹽、酸鹼度的檢測。

產品檢測範圍

檢測項目	檢測濃度範圍							單位
硝酸鹽 (NO ₃ +NO ₂) 亞硝酸鹽	0	10	25	50	100	250	500	毫克/升 (mg/L)
亞硝酸鹽 (NO ₂)	0	1	5	10	25	50	100	
餘氯 (OCl)	0	0.5	1	3	5	10	25	
總硬度 (GH)	0	<6°	7°	14°	21°			度 (d)
	0	100	125	250	375			毫克/升 (mg/L)
碳酸鹽 (KH)	0	3°	6°	10°	15°	20°		度 (d)
	0	53.5	107	180	270	360		毫克/升 (mg/L)
酸鹼度 (pH)	6.4	6.8	7.2	7.6	8.0	8.4		

檢測方式

1. 將測試紙浸入水中1~2秒後取出。
2. 將試紙用吸水紙去掉多餘水份，將試紙色塊朝上水平放置並按瓶身比色圖譜比較，請按比色圖譜上給定的時間讀取結果（硝酸鹽、亞硝酸鹽和餘氯的讀取結果時間為60秒，其他檢測項目的讀取結果時間為30秒）。
3. 記錄結果。



水樣的預先處理

1. 清澈和色度淺的水樣可直接進行檢測。
2. 較混濁和色度深的水樣，建議有條件的檢測機構進行預先處理後再進行檢測，結果會更加準確。
 - ① 色度較重的水樣，應先經脫色處理。
 - ② 混濁度較重的水樣，可經過過濾處理。

結果的解釋

1. 硝酸鹽的檢測結果為硝酸鹽和亞硝酸鹽的總和，若想要只得到硝酸鹽結果，可用亞硝酸鹽試紙先測出亞硝酸鹽的結果，再從硝酸鹽與亞硝酸鹽的總和中減去亞硝酸鹽，即得出硝酸鹽的含量。
2. 水的硬度指沉澱肥皂的程度，使肥皂沉澱的原因主要是由於水中的鈣、鎂離子，此外，鐵、鋁、錳、鋇及鋅也有同樣作用，總硬度可將上述各種離子的濃度相加進行計算。
3. 水的色度、渾濁度、游離氯會對酸鹼度的檢測產生干擾，氧化劑、還原劑、較高鹽量不產生干擾，但在強鹼性溶液中，存在大量鈉離子時會產生誤差，使讀取的結果偏低。

注意事項

1. 使用前請先仔細閱讀說明書。
2. 僅限一次性使用。
3. 試紙必須保存在原瓶中；不得除去乾燥劑；除非立即使用，否則不得將試紙從瓶中取出；取出試紙後立即旋緊瓶蓋。
4. 不要存放在冰箱中，避免陽光直射，不要觸碰試劑塊的反應區。
5. 用過的試紙請參考實驗室生物危害材料處理方法處理。

局限性

1. 本產品檢測結果為半定量結果。
2. 本產品所測得的各單項目中的最高濃度，樣本中很有可能存在大於這一濃度的被檢測物，建議將樣本用純淨水稀釋後，再進行測試，酸鹼度（pH）除外。
3. 水中三氯胺對亞硝酸鹽的檢測產生紅色干擾，鐵、鉛等離子可產生沉澱引起干擾，銅離子起催化作用，可分解重氮鹽使結果偏低，有色離子有干擾。

疑問的解決

若檢測結果未達預期，可先查驗產品是否在有效期內，如超過有效期可更換有效期內的产品進行檢測。

儲存條件及有效期限

在2°C~30°C條件下密封儲存，有效期為兩年；開封後，蓋緊瓶蓋，在2°C~30°C處存放，有效期為三個月。