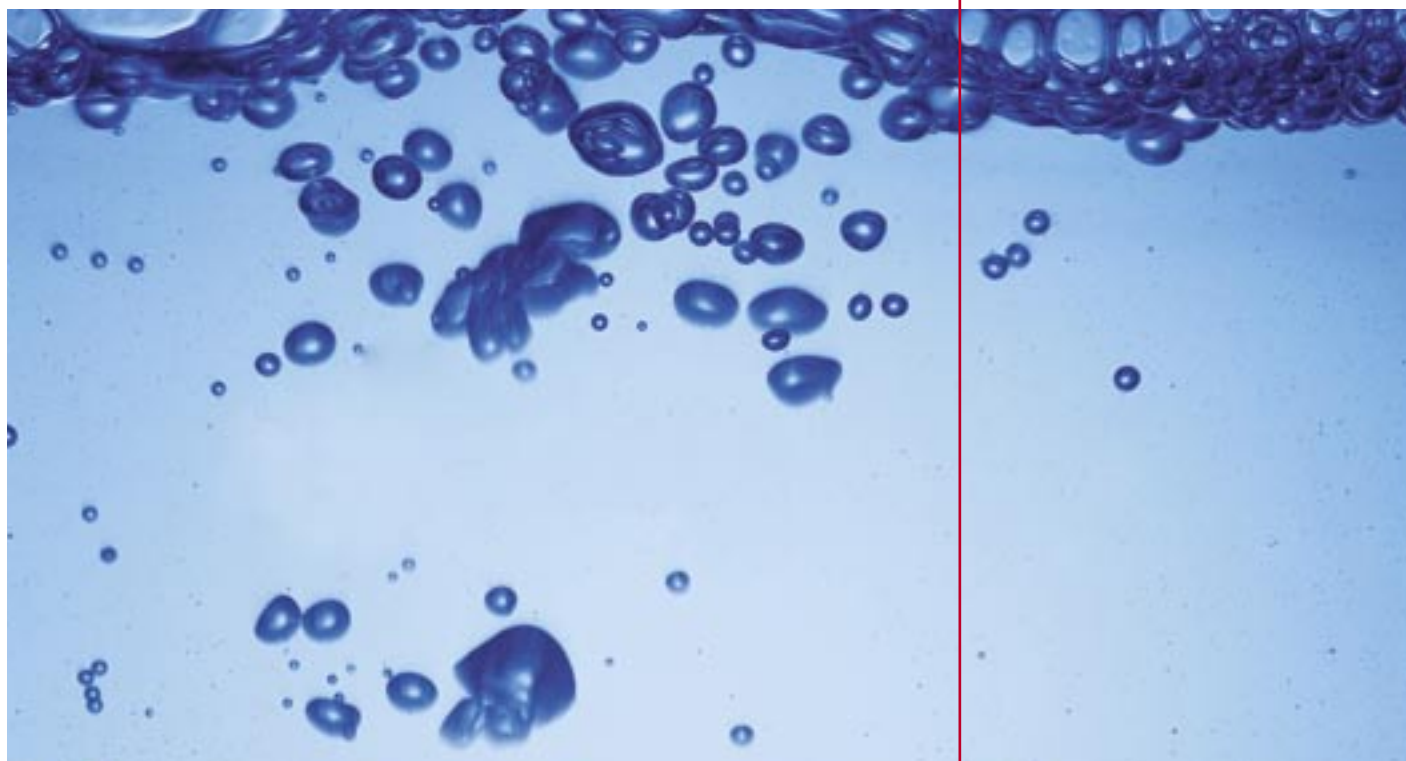


# Analytix *LabInfo*



## AQUANAL® Fishwater Lab

### Water as the Living Environment for Fish

The nine ingredients for an aqueous living environment can be determined directly in lakes, rivers and ponds or at home in an aquarium using the AQUANAL® Fishwater Lab. This kit contains six coloumetric and two titrimetric tests, the pH-value being determined by means of pH-paper. The evaluation is made using a colour card. More detailed information about the parameters and the effect of this kit on fish and plant life in inland waters can be found in the instructions for use.

## Parameters

**Ammonium:** is present in inland waters in a pH-dependant chemical equilibrium with ammonia. The test determines the total sum of ammonia and ammonium. Whilst ammonium is not dangerous for fish and is a fertiliser for plants, ammonia is a strong fish poison.

**Carbonate Hardness:** The fertility of a stretch of inland water can be ascertained with the help of carbonate hardness. This in fact dictates the quantity of fish present in the water. The acid-binding-capacity can, by association, also be determined using a multiplication factor.

**Iron:** Iron is an important factor; it is absolutely necessary for the production of haemoglobin but it can be dangerous for the entire fish population if it precipitates out in oxygen poor water. If this is the case, the gills become blocked, especially in young fish, and breathing is hindered.

**Total Hardness:** Determination of the total concentration of calcium and magnesium ions.

**Nitrate:** Nitrate can be washed into waterways from heavily fertilised fields. A high nitrate concentration leads to algae bloom and results in the decline of oxygen concentration.

**Nitrite:** In pure, healthy water, nitrite is never present. The presence of nitrite points to heavy pollution. Nitrite exists as an intermediate of natural decomposition and conversion processes of ammonium and nitrate. It indicates insufficient quality in the water necessary for fish.

**Phosphate:** On the one hand phosphate is a very important component of the skeleton and additionally for the energy exchange in plants and fish in water. However too much phosphate leads to over fertilisation and as a result to an oxygen deficiency.

**pH-Value:** The pH-value is influenced by most of the substances dissolved in water. A pH-value of 6.0 to 8.0 is normal for fish-sustaining waters. Values outside this range can result in diminished growth, skeletal deformities, skin and gill damage and at worst the death of the entire fish population.

**Oxygen:** The oxygen dissolved in water is essential for fish to breathe. Therefore the oxygen content should be as high as possible. The amount depends on, amongst other things, the temperature and bioorganisms in the water.

Parameter	Measurement Limits	Graduation of the individual Tests	Suitable for sea water
Ammonium	< 0.05 - 10.0 mg/l	< 0.05/ 0.2/ 1.0/ 3.0/ 10.0	no
Carbonate Hardness	> 1° CH	1 drop = 1° CH	yes
Iron	< 0.05 - 1.0 mg/l	< 0.05/ 0.1/ 0.3/ 0.6/ 1.0	yes
Nitrate	0 - 80 mg/l	0/ 10/ 25/ 50/ 80	no
Nitrite	< 0.02 - 1.0 mg/l	< 0.02/ 0.1/ 0.3/ 0.5/ 1.0	yes
Oxygen	0 - 10.0 mg/l	0/ 1/ 3/ 6/ 10	no
Phosphate	0 - > 6.0 mg/l	0/ 0.5/ 1.2/ 3.0/ > 6.0	yes
pH-Value	4.5 - 10.0 pH	in 0.5 pH-graduations	yes
Total Hardness	> 1° dH	1 drop = 1° dH	no

**Table 1** ..... Measurements Limits of the AQUANAL® Fishwater Lab

Cat. No.	Test	Product	Measuring
37566	Fishwater Lab	Original case	Case with tests for Ammonium, Carbonate Hardness, Iron, Nitrate, Nitrite, Oxygen, Phosphate, pH-value and Total Hardness. With colour chart and reaction tubes. 50-60 tests/parameter
37550	Fishwater Lab	Refill pack for Cat. No. 37566	Reagents for Ammonium, Carbonate Hardness, Iron, Nitrate, Nitrite, Oxygen, Phosphate, pH-value and total hardness testing
37542	Fishwater Lab reaction tubes	Refill pack tubes for Cat. No. 37566	1 pc/parameter of 37566
37574	Ökotest Total Hardness	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37595	Fishwater Lab Ammonium	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37596	Fishwater Lab Carbonate hardness	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37597	Fishwater Lab Iron	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37598	Fishwater Lab Total Hardness	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37599	Fishwater Lab Nitrate	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37606	Fishwater Lab Nitrite	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37607	Fishwater Lab Phosphate	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37609	Fishwater Lab Oxygen	Single param. ref. for Cat. No. 37566	Suitable for 50-60 tests
37028	Fishwater Lab pH Value	Single param. ref. for Cat. No 37566	100 Test sticks measuring range, measuring range 4.5-10.0

**Table 2** ..... AQUANAL® Fishwater Lab Product Information

**Technical support:**  
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#### Contact

Should you have questions regarding the AQUANAL® Fishwater Lab or any of the other AQUANAL® products please contact:

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