INSTRUCTIONS FOR USE

FAUNA MARIN

AQUAHOME**TEST NO_2 + NO_3**

Nitrite + Nitrate | Combi-Test | Saltwater aquariums

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AQUAHOMETEST NO_2 + NO_3

Contents of package:

- 50 ml/1.69 fl.oz. of reagent A
- 20 ml/0.68 fl.oz. of reagent B
- 10 ml/0.34 fl.oz. of reagent C
- 5 ml/0.17 fl.oz. of reference solution "Standard"
- 2 glass cuvettes 20 ml
- 1 dosing syringe 20 ml
- 1 dosing syringe 1 ml with dropper tip
- 2 colour cards
- 1 comparator
- 1 instruction for use

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Quick start guide:

NO_2 + NO_3 | KOMBI-TEST | MEERWASSERAQUARIEN | SALTWATER AQUARIUMS

KURZANLEITUNG | QUICK START GUIDE

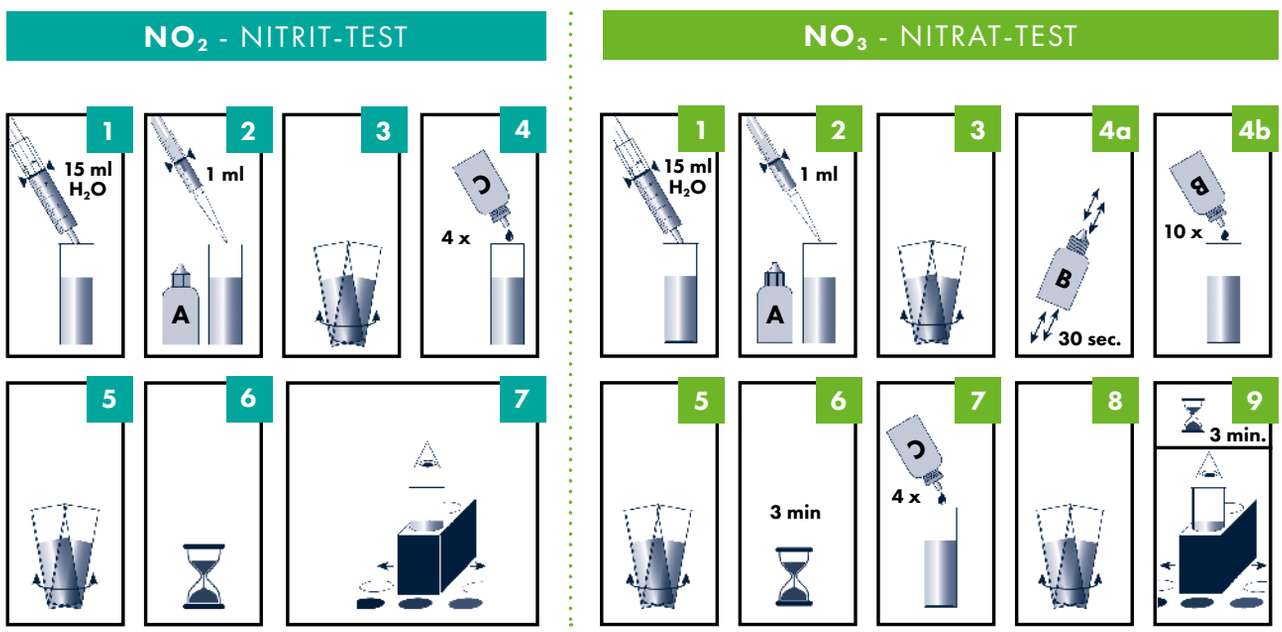

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Table: correction of nitrate concentration

NO_2	Gemessener NO_3 Wert | Measured NO_3 value						
(mg/l**)	≤ 0,5 mg/l	1 mg/l	2 mg/l	5 mg/l	10 mg/l	20 mg/l	
0,01	*	0	1	4	9	19	Corrected NO_3 value
0,02	*	*	0	3	8	18	
0,05	*	*	*	0	5	15	
0,1	*	*	*	*	0	10	
0,2	*	*	*	*	*	0	
≥ 0,5	*	*	*	*	*	*	
	Korrigierter NO_3 Wert | Corrected NO_3 value						

* Nitrate concentration cannot be determined because of the high nitrite level

** mg/l = mg/0,26 US gal.

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Precision for saltwater aquariums

Measurement range:
NO_2: 0 – 1,0 mg/l (0,26 US gal.) (ppm)
NO_3: 0 – 20 mg/l (0,26 US gal.) (ppm)

About nitrite and nitrate:

Nitrate ions (NO_3^-) are formed from ammonium (NH_4^+) as the end product of the nitrification process. Nitrite (NO_2^-), which is highly toxic to saltwater species in particular, is produced in the first stage of the bacterial process. If the nitrification process works, nitrite is converted to the comparatively non-toxic nitrate in the second stage. Increased levels of nitrite above 0.05 mg/l (0,26 US gal.) (ppm) are usually found in tanks that are in their maturation phase or in tanks with nitrate filters.

Nitrate affects the quality of the water in the aquarium: Higher concentrations of nitrate in saltwater aquariums will end up inhibiting the growth of delicate coral. An algal bloom is often the result of a high nitrate level in an aquarium. Some reef aquariums have ultra-low nutrient conditions – nitrate shortages can occur in cases such as these. Therefore, the nitrate concentration in the aquarium water should be tested regularly.

It is advisable to keep the nitrate concentration in saltwater aquariums below 20 mg/l (0,26 US gal.) (ppm). When nurturing hard coral, the aim is to keep the nitrate concentration below 10 mg/l (0,26 US gal.) (ppm). Lower limits for nitrate depend on the general conditions in the aquarium.

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Instructions for use:

Important information:

- High concentrations: If the nitrate concentration is above 20 mg/l (0,26 US gal.) (ppm) if the colours on the colour card are exceeded), dilute 3 ml of the test water with 12 ml of reverse osmosis water and carry out the test again. The result is then multiplied by **5**.

- Since nitrite (NO_2^-) has an impact on the nitrate measurement, the nitrite concentration should be tested now and again before carrying out the nitrate measurement. If nitrite is present, the nitrate results must be adjusted in relation to the table on page 4.

  Example:
  You measure a nitrate concentration of 20 mg/l (0,26 US gal.) (ppm) and a nitrite concentration of 0.1 mg/l (0,26 US gal.) (ppm). In the table, this corresponds to a true nitrate concentration of 10 mg/l (0,26 US gal.) (ppm) NO_3^- .

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Determining the nitrite level:

1. Shake the bottles before use!

2. Rinse out the glass cuvette with tap water and then several times with aquarium water.

3. Fill the glass cuvette with exactly **15 ml of aquarium water** using the dosing syringe and place it in the comparator which serves as a cuvette stand.

4. Place the dropper tip on the 1 ml dosing syringe, add **1 ml test reagent A**, close the glass cuvette using the stopper, briefly shake the solution and place it back in the comparator.

5. Then add **4 drops of test reagent C**, close the glass cuvette once again, shake it briefly and place it back in the comparator.

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Determining the nitrite level:

6. After **3 minutes of development time**, place the glass cuvette in the comparator on the white circles of the **nitrite colour card** in such a way that the second free opening on the comparator (without cuvette) is underneath the colour card (not on the colour fields) and the narrow end face of the comparator is facing the colour fields (cf. illustration on the Quick Start Guide). Now the colour of the water sample is compared to the opposing colour fields by daylight conditions. To do this, look into the open cuvette from above. Move the sample on the colour card until the cuvette colour and the colour field colour match exactly.

7. Read off the measured nitrite value under the relevant colour field. If the colours do not match exactly, an intermediate value can be estimated.

8. Rinse out the glass cuvette, the syringe and the syringe attachment thoroughly with tap water after the measurement process.

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Determining the nitrate level:

1. Shake the bottles before use!

2. Rinse out the glass cuvette with tap water and then several times with aquarium water.

3. Fill the glass cuvette with exactly **15 ml of aquarium water** using the dosing syringe and place it in the comparator which serves as a cuvette stand.

4. Place the dropper tip on the 1 ml dosing syringe, draw out **1 ml of test reagent A** and add it to the water sample. Close the glass cuvette using the stopper, briefly shake the sample and place it back in the comparator.

5. Shake the bottle with **test reagent B** vigorously in a horizontal direction for approx. 30 seconds (the reagent **must** be wellshaken). Then add **10 drops of test reagent B** to the aquarium sample, close the cuvette again, shake it briefly and place it back in the comparator.

6. After **3 minutes** of development time, add **4 drops of test reagent C**, close the glass cuvette once again, shake it briefly and place it back in the comparator.

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Determining the nitrate level:

7. After another **3 minutes** of development time, place the comparator on the white circles of the **nitrate colour card** in such a way that the second free opening on the comparator (without cuvette) is underneath the colour card (not on the colour fields) and the narrow end face of the comparator is facing the colour fields (cf. illustration on the Quick Start Guide). Look into the open cuvette from above and compare it to the opposing colour fields by daylight conditions. Move the sample on the colour card until the cuvette colour and the colour field colour match exactly.

8. Read off the measured nitrate value under the relevant colour field.
   If the colours do not match exactly, an intermediate value can be estimated.

9. Rinse out the glass cuvette, the syringe and the dropper tip thoroughly with tap water after the measurement process.

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Using the “standard” to verify the test:

The shelf life of reagents depends on storage conditions and other factors. If the functional capacity of the test is inadequate, there will be no colour reaction during the test, even if nitrate levels are particularly high.

If the measurement result is **below 1 mg/l (0,26 US gal.) (ppm)**, add **five drops** of the **reference solution “standard”** to a **new sample** in order to verify the reliability of the test.

If the colour changes to **pink** (2 mg/l (0,26 US gal.) (ppm) when you carry out the test again, then the reliability of the reagents is verified as good.

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How to correct unfavourable values:

If the **nitrate concentration** in the water is **too high**, we recommend:

- assessing and, where necessary, reducing the feeding quantities or enriching the food with Fauna Marin **FOOD ENERGIZER /GARLIC-CONCENTRATE**
- assessing and, where necessary, regulating the stocking rate;
- using Fauna Marin **BACTO BLEND/BACTO THERAPY** and/or **BACTO BALLS** to reduce the nutritional level over the medium term;
- exchanging a proportion of the water on a regular basis.

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Safety instructions:

Solution A:
Causes skin irritation.
Causes serious eye irritation.
IF IN EYES: Rinse cautiously with water for several minutes.

Solution B and C:
Highly flammable liquid and vapour.
Keep away from heat / sparks / open flames / hot surfaces.
No smoking.

Keep out of reach of children.

DANGER

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TIP:

In order to protect the environment, the reagents for the Nitrite + Nitrate Combi-Test **AQUA**HOME**TEST** are also available in affordable refill packs!

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Shelf life and storage:

6 months after opening.
Store in a cool, dark place.

Informationen and support:

For further information or individual advice please write to us
directly in our support forum: **https://forum.faunamarin.de**

Further instructions, information about animals and our products can be found on our website **www.faunamarin.de**
in the download center: **www.faunamarin.de/support-downloads/**

In our knowledge database you will find further information
about the understanding of laboratory analyses:
https://www.faunamarin.de/wissensdatenbank/

Good success!

FAUNA MARIN GmbH

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