INSTRUCTIONS FOR USE

FAUNA MARIN
AQUAHOME**TEST K**

Potassium Test | Saltwater aquariums

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AQUAHOMETEST K

Contents of package:

- 12 ml/0.40 fl.oz.“Standard“ (400 mg/l (0,26 US gal.)),
- 25 ml/0.85 fl.oz. of reagent A,
- 25 ml/0.85 fl.oz. of reagent B,
- 5 ml/0.17 fl.oz. of reagent C,
- 30 ml/1.01 fl.oz. of reagent D,
- 2 glass cuvettes 10 ml,
- 3 dosing syringes 1ml with syringe tips,
- 1 instruction for use

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Quick start guide:

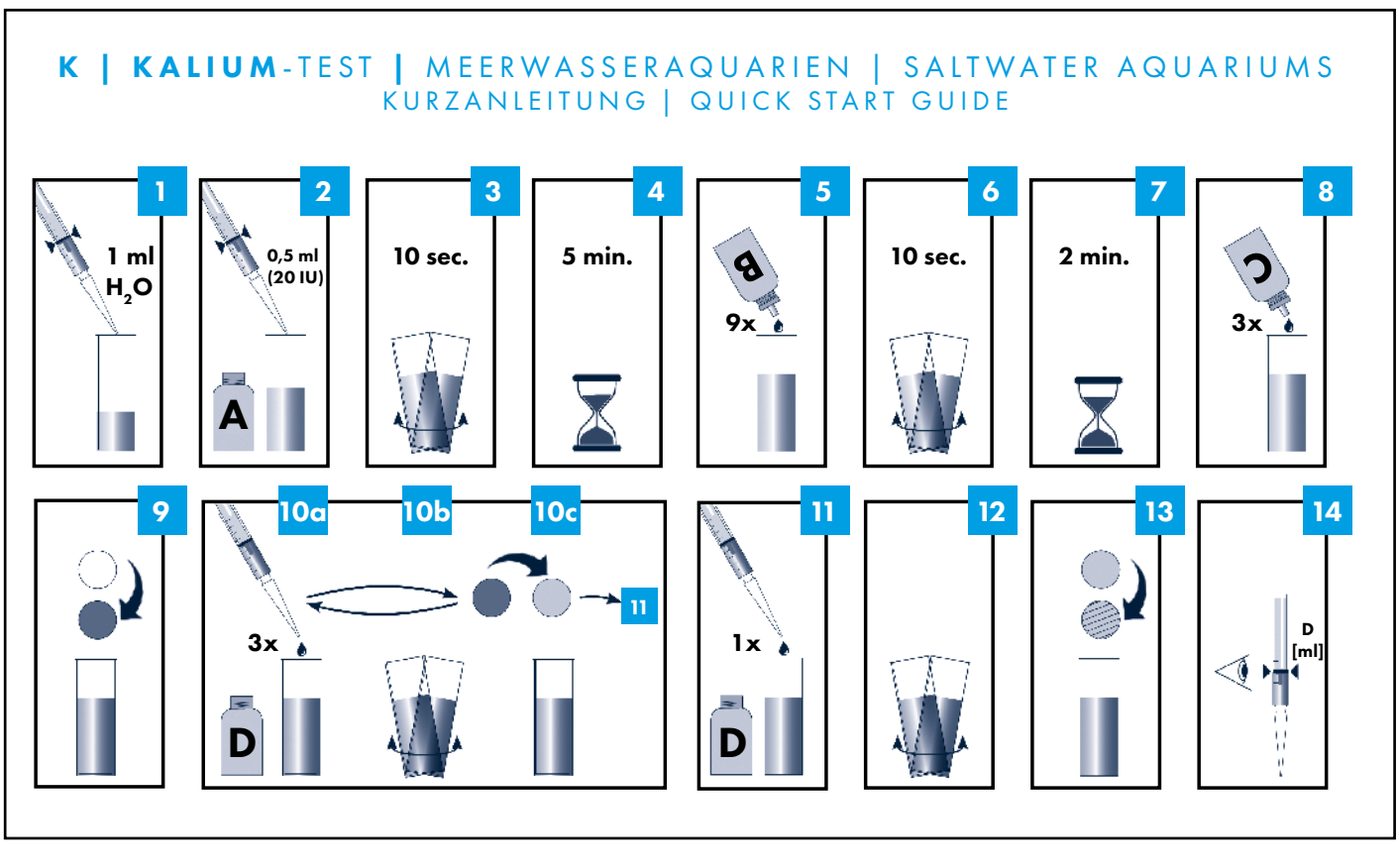

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Table: Potassium Concentrations

D[ml]*	K+[mg/l]**	D[ml]*	K+[mg/l]**	D[ml]*	K+[mg/l]**
0,00	300	**0,28**	370	**0,56**	440
0,02	305	**0,30**	375	**0,58**	445
0,04	310	**0,32**	380	**0,60**	450
0,06	315	**0,34**	385	**0,62**	455
0,08	320	**0,36**	390	**0,64**	460
0,10	325	**0,38**	395	**0,66**	465
0,12	330	**0,40**	400	**0,68**	470
0,14	335	**0,42**	405	**0,70**	475
0,16	340	**0,44**	410	**0,72**	480
0,18	345	**0,46**	415	**0,74**	485
0,20	350	**0,48**	420	**0,76**	490
0,22	355	**0,50**	425	**0,78**	495
0,24	360	**0,52**	430	**0,80**	500
0,26	365	**0,54**	435		

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Reagent left in syringe D[ml]

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Potassium Concentrations K^+ in mg/l (0,26 US gal.)/ppm

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Precision for saltwater aquariums

Measurement range:
300 – 500 mg/l (0,26 US gal.)/ppm

About potassium:

Potassium is a vitally important macro-nutrient for all living beings.
In natural ocean water, this alkali metal is present in an average concentration of 408 mg/l (0,26 US gal.). In a saltwater aquarium, the potassium concentration is usually kept stable by regularly changing the water. Nevertheless, a lack of potassium can occur in individual aquariums tanks due to the use of zeolites and other adsorbents. One sign of a possible lack of potassium is clear discolouration of corals and retraction of polyps.
The potassium level in a saltwater aquarium should be checked regularly to ensure that the level is between 380 and 420 mg/l (0,26 US gal.).

Information regarding the potassium test:

The precision of the measurement results may be increased by determining a „correction value“. **For this purpose a measurement with reagent “Standard” (potassium) is carried out**.
This measurement indicates the correction value that should be included during each potassium measurement.
We recommend determining the correction value again every 3 – 4 weeks.

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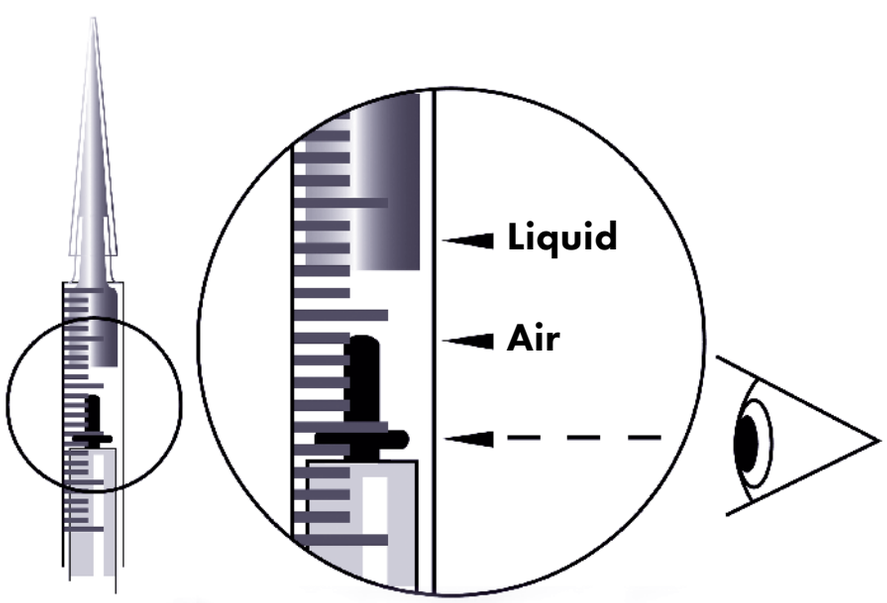
Instructions for use:

General information:

To avoid cross-contamination, the dosing syringes with syringe tips must only be used for the same reagents! In addition, the used glass cuvettes, syringes, and syringe tips MUST be cleaned after each series of measurements (see page 13)!

Dip the syringes into the liquid before drawing up the syringe. Readings on dosing syringes are always taken at the plunger even if there is air between the plunger and the liquid (caused by the empty volume of the syringe tip, see illustration). The air bubble will not affect the test result.



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1. Determining the correction value“:

1.1 If you recently determined the correction value, then proceed to **item 2** “Determining the potassium concentration”.

1.2 Shake all reagent bottles before use!

1.3 Place a clean syringe tip onto the 1 ml dosing syringe with **green** piston and draw up **1ml of “Standard”**.
Ensure the dosing syringe is as dry as possible.
Add the entire volume to one of the two cuvettes.

1.4 Now carry out the potassium measurement as described at points 2.3 to 2.8.

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1. Determining the correction value“:

1.5 The correction value can now be determined using the **table on the cover page**. To do so, read the corresponding potassium concentration of the **residual volume** of **reagent D** on the table. Subtract this value (measured potassium concentration) from the standard value 400 mg/l (0,26 US gal.) (concentration of the potassium standard). That is how to determine the **correction value** that you will use for the measurement values established later on.

Example:

Residual volume of reagent D_1: 0.48 ml
Potassium concentration K_1: 420 mg/l (0,26 US gal.)
Calculation:
400 mg/l (0,26 US gal.) - 420mg/l (0,26 US gal.) = **-20 mg/l** (0,26 US gal.).
Result:
Deduct a **correction value** of 20 mg/l (0,26 US gal.)
from future potassium measurements.
If you come up with a positive value,
add this to future potassium measurements.

1.6. The used glass cuvette, syringes, and syringe tips must be thoroughly cleaned after completing the actual potassium measurements (see item 3 on page 13).

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2. Determining the potassium concentration:

2.1 Shake all reagent bottles before use!

2.2 Insert a clean syringe tip onto the1ml dosing syringe with the **green** piston, flush out the syringe several times with the water sample being tested (aquarium water) and then draw up **1ml of this water**.
Empty the entire amount into the clean second cuvette.

2.3 lace a clean syringe tip onto the1ml dosing syringe with **red** lettering and draw out **reagent A** up to the **20 marking** on the syringe (corresponds with 0.5 ml). Add the entire amount to the water sample.

The exact completion of this step is very important for the precision of the final result!

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2. Determining the potassium concentration:

2.4 Swirl the cuvette with the water sample for approx. 10 sec. to mix the reagent well, and then wait 5 minutes. White clouding will form.

2.5 Add **9 drops** of **reagent B**, swirl for10 seconds, and allow the cuvette to stand for another 2 minutes.

2.6 Next, add **3 drops** of **reagent C** from the dropper bottle, and the water sample will turn to a **yellow colour**.

2.7 Place another clean syringe tip onto the third 1 ml dosing syringe with **black** lettering and draw out **1ml** of **reagent D**.
Each time add **three drops** of **reagent D** to the water sample **(CAUTION: Do not add, under any circumstances, a larger amount of reagent D all at once into the cuvette)** and mix the reagent thoroughly by swirling it carefully.
This is important so that a clear colour changing point is available later.
Repeat this procedure until the yellow colour disappears and turns into a pale pink colour.

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2. Determining the potassium concentration:

2.8 After that, continue carefully with the titration. After each drop of **reagent D**, the cuvette must be swirled until a **rich, darker pink colour** results after approx. 1– 3 droplets.
Read the **remaining quantity** of **reagent D** on the syringe.

Note:

If you are unsure if the end point of the titration has been reached, then add **one more drop of reagent D**.
If the colour intensity does NOT continue to increase, then the final point of titration has already been reached. In this case, add on the last drop (0.01 ml) to the remaining quantity (mathematically).

At this point, if you come up with the determined correction value, continue with point 1.5. To determine the actual potassium level in your water sample, continue with your measurement at point 2.9.

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2. Determining the potassium concentration:

2.9 The corresponding potassium concentration can now be read on the **table on the cover page** using the **residual volume** of **reagent D**. Provided it has been determined previously, the **correction value** determined at point 1.5 is either deducted (negative value) from the potassium concentration or added to it (positive value).

Example:

Residual volume of reagent D_2: 0.40 ml
Potassium concentration K_2: 400 mg/l (0,26 US gal.)
Correction value determined -20 mg/l (0,26 US gal.)
Calculation:
400 mg/l (0,26 US gal.)- 20 mg/l (0,26 US gal.) = 380 mg/l (0,26 US gal.)
Result:
The **potassium concentration** of the tested water sample is 380 mg/l (0,26 US gal.) taking **into account the correction value**.

2.10 If additional measurements are carried out immediately, then the cuvette(s) and the syringe with the green piston should be cleaned briefly using **reverse osmosis water**. After completing the measurement series, the glass cuvettes should immediately be cleaned thoroughly according to item 3 so that precipitation cannot adhere too severely.

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3. Cleaning the glass cuvette and syringes:

After completing a test series, we recommend cleaning the used glass cuvettes, syringes, and syringe tips.

- The syringes and associated syringe tips must be flushed out thoroughly with **reverse osmosis water** and left to dry.

- Rinse out the glass cuvettes thoroughly with tap water.
  Clean the cuvettes with a piece of paper towel as best as possible, rinse thoroughly with **reverse osmosis water**, and leave them to dry.
  A light precipitation may remain. To remove this, we recommend using a suitable brush or adding some household **vinegar** or **vinegarbased cleaner**.
  Allow the vinegar solution to sit for 12 – 24 hours, then rinse out the cuvette with **reverse osmosis water** and allow it to dry.

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How to correct low or high potassium levels:

To increase the potassium concentration in case of values that are too low, we recommend using Fauna Marin **ELEMENTALS K** to adjust the potassium level to the natural level again and to produce an increase in the vitality of diverse corals as well.

If the potassium level in the water is too high, we recommend doing a **partial water change**.

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Safety instructions:

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

Keep out of reach of children.

WARNING

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TIP:

In order to protect the environment, the reagents for the
Potassium 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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