

KH Alkalinity Profi Test

The KH / Alkalinity test can be used for testing Marine and Fresh water.

November 2010 version. Colors are stronger and the accuracy has been improved by correcting for what is called in analytical chemistry the indicator error or blank titration. Because of the improvements the results are even more accurate and you might find in comparison to the previous version a value which is lower by approx. 0.3 dKH. This is a more accurate value.

A free reference/check solution is **sometimes** included.

The KH-Ind reagent contains a dye. Avoid spilling the dye on fabric and other materials since they may become stained. Keep out of reach of children. Not for consumption.

INSTRUCTIONS

1] Add with the 5-ml syringe 4ml of water in the test vial. For a lower resolution and more tests per kit add 2 instead of 4 ml.

2] Shake the KH-Ind dropping bottle a few times and add 4 drops in the test vial (2 drops for the low-resolution mode).

3] Put the plastic tip firmly on the 1 ml syringe. And draw into the syringe the KH reagent (ensure that the end at the plastic tip is constantly submersed in the KH reagent) till the lower end of the black part of the piston is exactly at the 1.00 ml mark. There will be some air present just below the piston. This is the air which was present between the end of the plastic tip and the piston. This will not influence the test result.

4] Add dropwise (or up to approx. 80% of the expected amount) with the 1 ml syringe the KH reagent to the water in the test tube. Swirl after each drop a second or two. Continue with adding dropwise until the color changes from blue / green to an orange-red or pink color (whichever color is observed first).

5] Hold the syringe with the tip facing upward and read the position of the, now the upper end, of the black part of the piston. The syringe has graduations of 0.01 ml. Read the KH alkalinity value from the table.

This batch was tested at various values ranging from approx. 6.5 to 12 dKH and the variation was typically +/- 0.2 dKH or less. The 0.3 dKH is the resolution of the kit. At values higher than 11 dKH the results can start to deviate by approx. +/- 3%.

If you have chosen for the lower resolution mode multiply the calculated result by 2. Natural seawater has a KH of 7-8 dKH or of 2,5 – 2,9 meq/L which is a different unit for expressing KH / alkalinity.

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KH / Alkalinity Table

If you took 2 ml of water in step 1 then multiply the KH and alkalinity values by 2!

Reading in m's (Step 5)	KH value in dKH	Alkalinity in meq / L
0.00	15.7	5.59
0.02	15.3	5.48
0.04	15.0	5.36
0.06	14.7	5.25
0.08	14.4	5.13
0.10	14.1	5.02
0.12	13.7	4.90
0.14	13.4	4.79
0.16	13.1	4.68
0.18	12.8	4.56
0.20	12.5	4.45
0.22	12.1	4.33
0.24	11.8	4.22
0.26	11.5	4.10
0.28	11.2	3.99
0.30	10.9	3.88
0.32	10.5	3.76
0.34	10.2	3.65
0.36	9.9	3.53
0.38	9.6	3.42
0.40	9.3	3.30
0.42	8.9	3.19
0.44	8.6	3.08
0.46	8.3	2.96
0.48	8.0	2.85
0.50	7.7	2.73
0.52	7.3	2.62
0.54	7.0	2.50
0.56	6.7	2.39
0.58	6.4	2.28
0.60	6.1	2.16
0.62	5.7	2.05
0.64	5.4	1.93
0.66	5.1	1.82
0.68	4.8	1.70
0.70	4.5	1.59
0.72	4.1	1.48
0.74	3.8	1.36
0.76	3.5	1.25
0.78	3.2	1.13
0.80	2.8	1.02
0.82	2.5	0.90
0.84	2.2	0.79
0.86	1.9	0.67
0.88	1.6	0.56
0.90	1.2	0.45
0.92	0.9	0.33
0.94	0.6	0.22
0.96	0.3	0.10
0.98	0.0	0.00
1.00	0.0	0.00