

REF 985 015

en

Test 0-15

06.13

NANOCOLOR® Carbonate hardness 15

Acid binding capacity

Method:

The term carbonate hardness, or acid binding capacity respectively, refers to the part of calcium or magnesium ions which is present in form of carbonate or hydrogen carbonate. Photometric determination of the carbonate hardness in water with bromophenol blue.

Range:	1.0–18.0 °e	0.4–5.4 mmol/L H ⁺
Factor:	not linear	
Wavelength (HW = 5–12 nm):	436 / 585 nm	
Reaction time:	2 min (120 s)	
Reaction temperature:	20–25 °C	

Contents of reagent set:

- 20 test tubes Carbonate hardness 15
- 1 tube NANOFIX Carbonate hardness 15 R2
- 1 test tube with blanc value "NULL"

Hazard warning:

This test does not contain any harmful substances which must be specially labelled as hazardous.

Preliminary tests:

If the order of magnitude of the concentration in a sample is not known, a preliminary test with VISOCOLOR® *alpha* Carbonate hardness (REF 935 016) or with VISOCOLOR® *ECO* Carbonate hardness (REF 931 014) rapidly gives this information. From the order of magnitude the required dilution can be calculated and prepared directly.

Interferences:

The carbonate hardness would ordinarily be lower than the overall hardness. If, however, the carbonate hardness is higher than the total water hardness, the ratios are abnormal and should be clarified; e.g. introduction of alkali hydrogen carbonates or high buffering capacity.

The method can be applied also for the analysis of sea water.

Procedure:

Requisite accessories: piston pipette with tips

- Open test tube, add
- 4.0 mL test sample, close and mix. Add
- 1 NANOFIX R2, close and shake well.
(Close NANOFIX tube immediately after use.)
- Clean outside of test tube and measure after 2 min.
- Adjust photometer to zero by using blank value "NULL".

Measurement:

For NANOCOLOR® photometers and PF-11 / PF-12 see manual, test 0-15.

Measurement when samples are colored or turbid:

For all NANOCOLOR® photometers see manual.

Photometers of other manufacturers:

For other photometers check whether measurement of round glass tubes is possible. Verify calibration curve for each type of instrument by measuring standard solutions.

Conversion:

1.0 °e \triangleq 0.3 mmol/L H⁺ \triangleq 0.8 °d \triangleq 1.42 °f