

**Alkalinity-m T****30****5 - 200 mg/l CaCO<sub>3</sub>****tA****Acid / Indicator**

## Instrument specific information

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

Instrument Type	Cuvette	$\lambda$	Measuring Range
MD 100, MD 110, MD 200, MD 600, MD 610, MD 640, MultiDirect, PM 600, PM 620, PM 630	ø 24 mm	610 nm	5 - 200 mg/l CaCO <sub>3</sub>
SpectroDirect, XD 7000, XD 7500	ø 24 mm	615 nm	5 - 200 mg/l CaCO <sub>3</sub>
Scuba II	ø 24 mm	530 nm	0 - 200 mg/l CaCO <sub>3</sub>

## Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Alka-M-Photometer	Tablet / 100	513210BT
Alka-M-Photometer	Tablet / 250	513211BT

## Application List

- Drinking Water Treatment
- Waste Water Treatment
- Raw Water Treatment
- Pool Water Treatment
- Pool Water Control

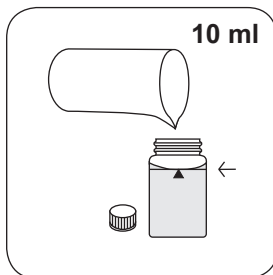
## Notes

1. The terms Alkalinity-m, m-Value, total alkalinity and Acid demand to  $p_{H4.3}$  are identical.
2. For accurate results, exactly 10 ml of water sample must be used for the test.

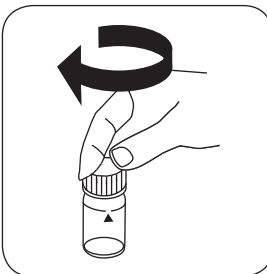
## Implementation of the provision $\text{Alkalinity, total} = \text{Alkalinity-m} = \text{m-Value with Tablet}$

Select the method on the device

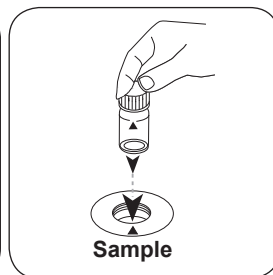
For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500



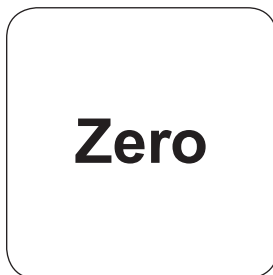
Fill 24 mm vial with **10 ml sample**.



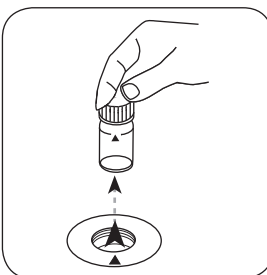
Close vial(s).



Place **sample vial** in the sample chamber. • Pay attention to the positioning.

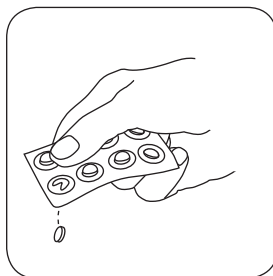


Press the **ZERO** button.

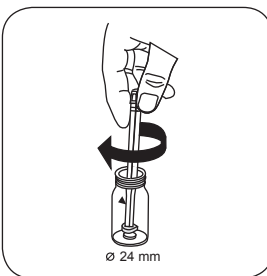


Remove the vial from the sample chamber.

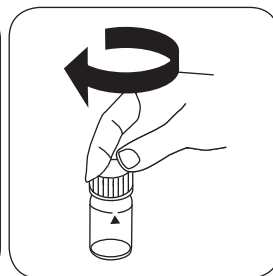
For devices that require **no ZERO measurement**, start here.



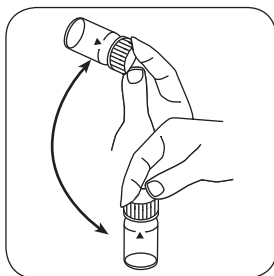
Add **ALKA-M-PHOTOMETER** tablet.



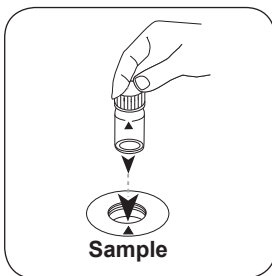
Crush tablet(s) by rotating slightly.



Close vial(s).



Dissolve tablet(s) by inverting.



Place **sample vial** in the sample chamber. • Pay attention to the positioning.



Press the **TEST** (XD: **START**) button.

The result in Alkalinity-m appears on the display.

## Analyses

The following table identifies the output values can be converted into other citation forms.

Unit	Cite form	Scale Factor
mg/l	CaCO <sub>3</sub>	1
	°dH	0.056
	°eH	0.07
	°fH	0.1
	°aH	0.058
	K <sub>S4.3</sub>	0.02

$$10 \text{ mg/l CaCO}_3 = 10 \text{ mg/l} \times 0,056 = 0,56 \text{ °dH}$$

$$10 \text{ mg/l CaCO}_3 = 10 \text{ mg/l} \times 0,02 = 0,2 \text{ mmol/l KS4.3}$$

## Chemical Method

Acid / Indicator

## Appendix

### Derived from

EN ISO 9963-1

<sup>a)</sup> determination of free, combined and total | <sup>b)</sup> Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C) | <sup>c)</sup> MultiDirect: Adapter is necessary for Vacu-vials® (Order code 19 20 75) | <sup>d)</sup> Spectroquant® is a Merck KGaA Trademark | <sup>e)</sup> alternative reagent, used instead of DPD No.1/No.3 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity | <sup>f)</sup> additionally required for determination of bromine, chlorine dioxide and ozone in the presence of chlorine | <sup>g)</sup> Reagent recovers most insoluble iron oxides without digestion | <sup>h)</sup> additionally required for samples with hardness values above 300 mg/l CaCO<sub>3</sub> | <sup>i)</sup> high range by dilution | \* including stirring rod, 10 cm