



## Hardness Calcium (B) T

M190

50 - 900 mg/L CaCO<sub>3</sub>

Murexide

### 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 600, MD 610, MD 640, MultiDirect, XD 7000, XD 7500	ø 24 mm	560 nm	50 - 900 mg/L CaCO <sub>3</sub>

### Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
CALCHECK	Tablet / 100	515650BT
CALCHECK	Tablet / 250	515651
CALCHECK	Tablet / 250	515651BT

### Application List

- Cooling Water
- Boiler Water
- Drinking Water Treatment
- Raw Water Treatment

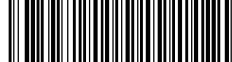
### Preparation

1. Strong alkaline or acidic water samples should be adjusted between pH 4 and pH 10 before the analysis (use 1 mol/l Sulphuric acid or 1 mol/l Sodium hydroxide).
2. It is better practice to use special vials with a larger volume.



## Notes

1. The method works in the high measuring range with greater tolerances than in the low measuring range. When diluting samples, always measure in the first third of the range.
2. This method was developed from a volumetric procedure for the determination of calcium. Due to undefined conditions, the deviations from the standardised method may be greater.

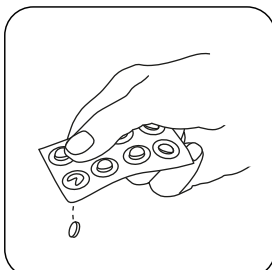


## Determination of Hardness Calcium with Tablet

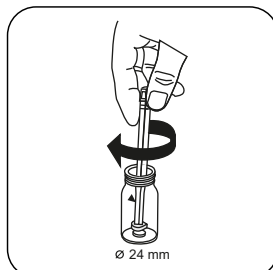
Select the method on the device.



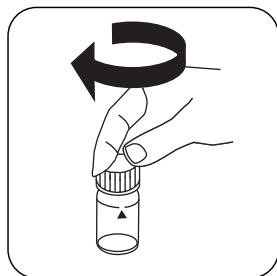
Fill 24 mm vial with **10 mL** deionised water .



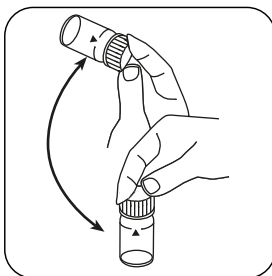
Add **CALCHECK** tablet.



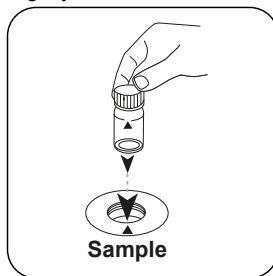
Crush tablet(s) by rotating slightly.



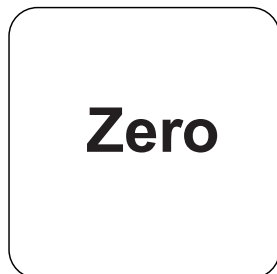
Close vial(s).



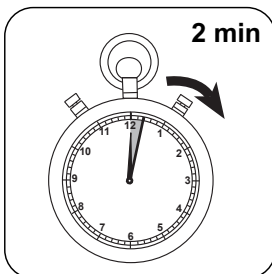
Dissolve tablet(s) by inverting.



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

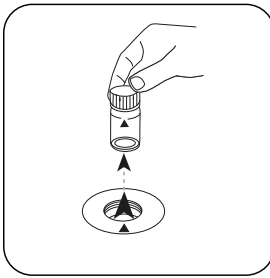


Press the **ZERO** button.  
XD: Sampleblank

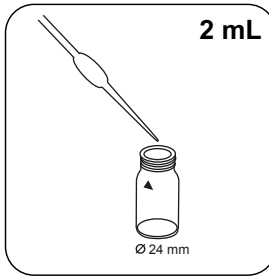


Wait for **2 minute(s) reaction time**.

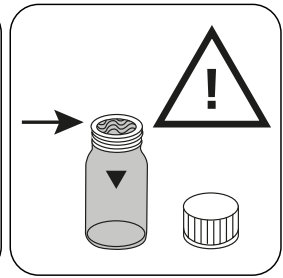
Once the reaction period is finished, the measurement takes place automatically.



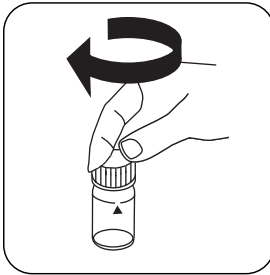
Remove the vial from the sample chamber.



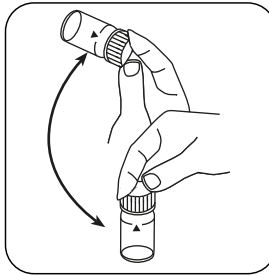
Put **2 mL sample** in the vial.



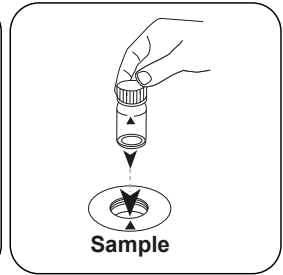
**Note: Vial is filled to the top!**



Close vial(s).



Invert several times to mix the contents (5x).



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

## Test

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

The result in Calcium Hardness 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	1
mg/l	Ca	0.40043

## Chemical Method

Murexide

## Appendix

## Interferences

### Persistent Interferences

1. Silver, mercury, cadmium, cobalt and copper interfere with the test result.

### Bibliography

Photometrische Analyse, Lange/ Vjedelek, Verlag Chemie 1980