

Hardness Calcium**56I700270****5 - 600 mg/L CaCO₃****Material**

Reagents	Packaging Unit	Part Number
Hardness Calcium Buffer CH2	65 mL	56L014465
Hardness Calcium Indicator CH1P	Powder / 20 g	56P021620
Hardness LR Titrant TH3	65 mL	56L016265
Hardness HR Titrant TH4	65 mL	56L014565
Hardness Total Indicator TH1P	Powder / 40 g	56P028340
Hardness Total Buffer TH2	65 mL	56L016065

The following accessories are required.

Accessories	Packaging Unit	Part Number
Syringe, plastic, 20 mL	1 pc.	56A006501
Titration jar with cap, plastic, 60 mL	1 pc.	56A006701

Application List

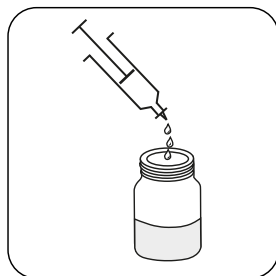
- Cooling Water

Sampling

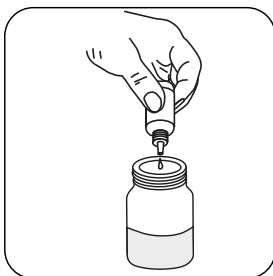
Select the sample volume from the table according to the expected measuring range and read off the factor to calculate the result.

Expected Range	Titrant used	Sample Size	Factor
5-15 mg/L	Hardness LR Titrant TH3	40 mL	0.5
10-30 mg/L	Hardness LR Titrant TH3	20 mL	1
20-60 mg/L	Hardness LR Titrant TH3	10 mL	2
50-150 mg/L	Hardness HR Titrant TH4	40 mL	5
100-300 mg/L	Hardness HR Titrant TH4	20 mL	10
200-600 mg/L	Hardness HR Titrant TH4	10 mL	20

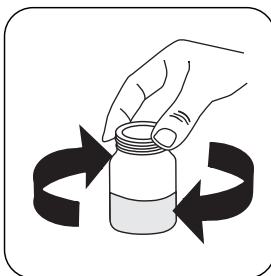
Determination of Hardness Calcium



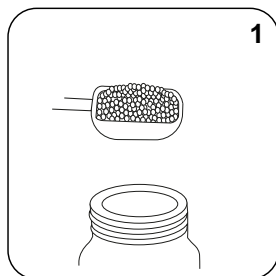
Attention! Select the appropriate sample volume according to the instructions in the chapter Sampling.



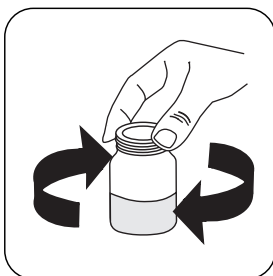
Add **4** drops of **Hardness Calcium Buffer CH2** per **10 mL** of sample.



Swirl to mix.



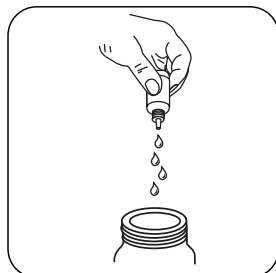
Add **1** measuring scoop(s) **Hardness Calcium Indicator CH1P**.



Swirl to mix.

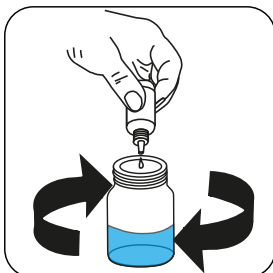


The sample will turn **wine red**.



Attention! Record the number of drops that will be added.

Note: Make sure to swirl the jar after adding each drop!



Add **Hardness LR Titrant TH3** or **Hardness HR Titrant TH4** drop by drop to the sample until colouration turns from **wine red** to **blue**.

Calculate test result: Total Hardness (as CaCO₃) mg/L = Number of drops x factor (see table)