titramax VT ALKALINITY

Determination of Carbonate and Bicarbonate Hardness of water

Product description

The **Titramax VT ALKALINITY** is suitable for determination of carbonate and bicarbonate hardness of water samples. The alkalinity of natural waters is primary caused by hydroxyl ions in free state and the salts of carbonate and bicarbonate along with borates, silicates and phosphates.

The device is conform to standards **ASTM D 1121, DIN EN ISO 787-4, DIN ISO 125, ISO 10539**.

The measurement uses a volumetric titration method with sulphuric acid or hydrochloric acid (0.01 – 0.1 mol/L). Once the water sample is dosed into the reagent, the titration with acid starts. The user has to enter the sample weight into the menu. The titration speed is precisely adjusted to the reaction rate by control algorithms. The titration is performed automatically until the endpoint indication of measurement.

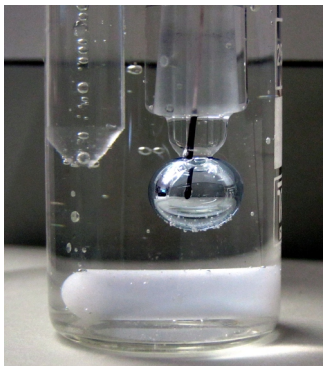
At the end of the measurement, results are shown in mg/L $CaCO_3$ or mmol/L °dH (degrees of German hardness) or several other units.

Titramax VT ALKALINITY

Applications

Alkalinity values are the basis for correct dosage of chemicals for treatment of water and wastewater. The instrument is suitable for analysis of

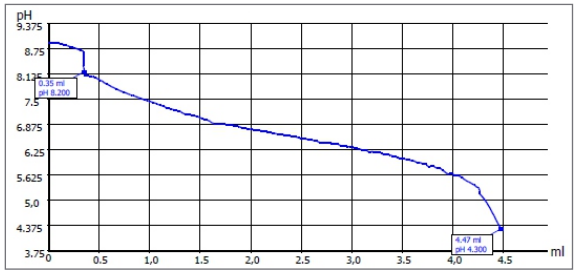
- drinking water
- surface water
- seawater
- technical waters
- boiler water
- cooling water



Titration tip and pH-electrode in sample solution

Advantages

- Complete measuring system for the determination of alkalinity
- Fully-automatic volumetric titration
- Precise adjustment of the titration parameters by control algorithms
- Preset measurement method allows an immediate start
- The result output can be adjusted to your needs by using a formula generator



Titration graph of a sample

Features

The **Titramax VT ALKALINITY** consists of

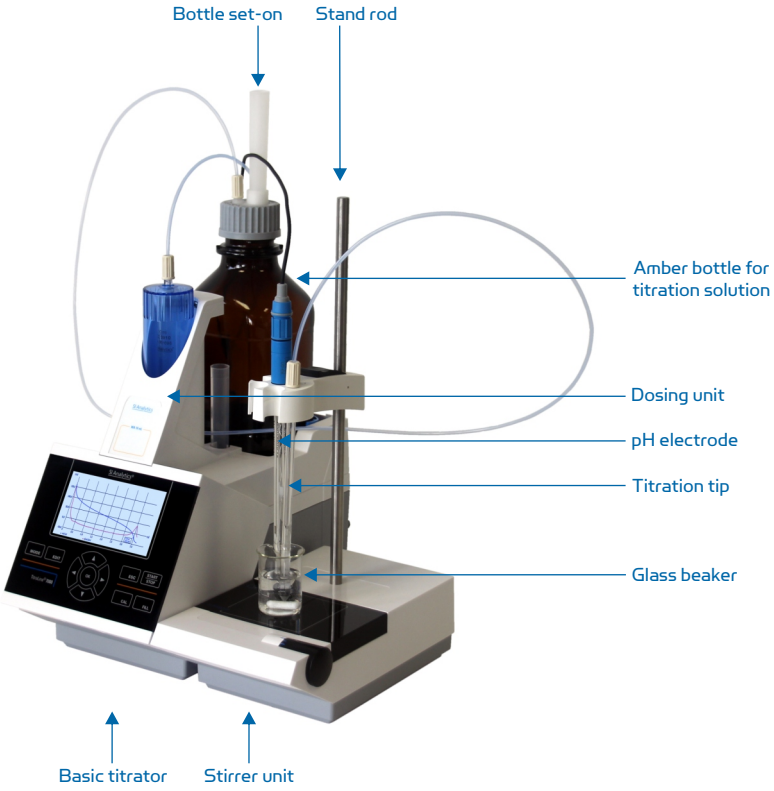
- an automatic volumetric titrator with potentiometric pH indication and integrated temperature sensor
- a titration vessel with stirrer unit

The determination of alkalinity value is based on

- an acid-base-titration in an aqueous medium
- a precise indication by a selective electrode, which is stable over long periods

Steps of the analysis are

1. Calibration of the electrode
2. Standardization of the titration solution
3. Titration of water samples



Technical specifications

Measurement method:	Volumetric titration
Types of result:	p value mmol/L $CaCO_3$ = German hardness degree (° dH) m value mmol/L, formula generator available
Measuring range / Display resolution:	pH: 1 ... 14; mV: - 2000 ... 2000 / pH: 0.001; mV: 0.1
Accuracy pH / mV (without sensor):	0.002 / 0.1 mV ± 1 digit
Measurement range µA:	0 ... 100
Display resolution µA:	0.1
Accuracy µA (without sensor):	0.2 ± 1 digit
Measurement range temperature °C:	- 75 ... 175
Amplifier input impedance:	$> 1 \cdot 10^{13}$ ohms
Burette resolution:	10,000 steps for 10 mL / 20 mL ± 0.15 %
Dosing accuracy according DIN EN ISO 8655, part 3:	Accuracy 0.15 % / Precision 0.05 - 0.07 % (depending on the used exchange unit)
Filling time:	20 sec
Power supply:	External plug-in power supply 100 - 240 V, 50/60 Hz
Power input:	30 VA
Stirrer connection:	12 V DC out, 500 mA
Dimensions:	30 x 45 x 30 cm (W x H x D), height with exchange unit
Weight:	Approx. 3.5 kg (with exchange unit and empty reagent bottle)

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