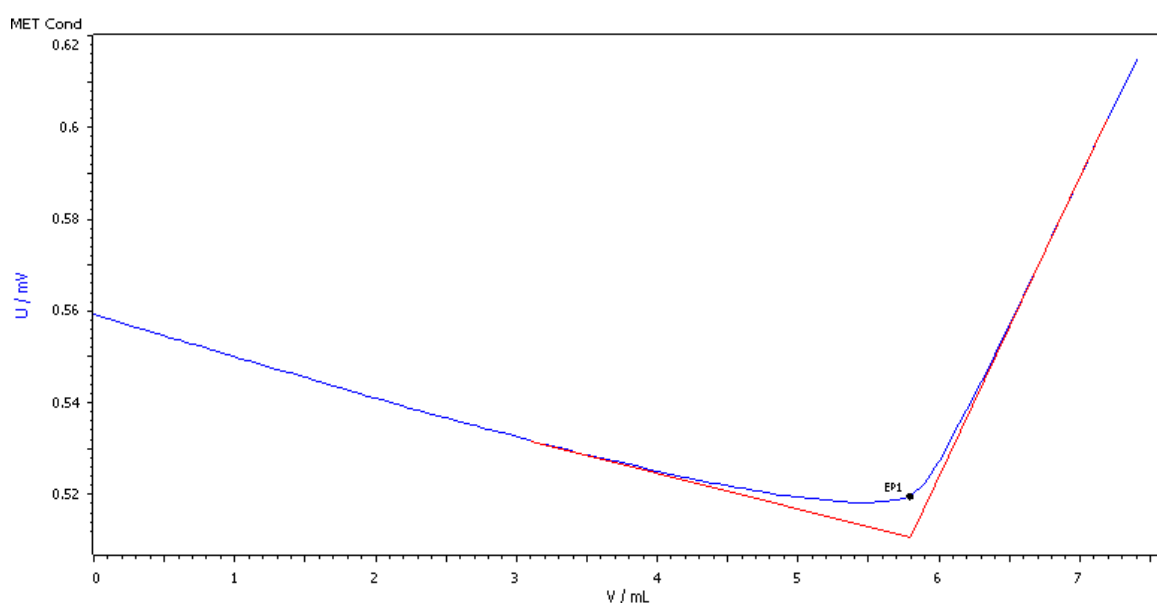


Standardization of barium acetate titrant for conductometric sulfate titration



For the conductometric sulfate determination, barium acetate is used as titrant. It can be standardized using dried sodium sulfate.

Method description

Sample

Sodium sulfate

Sample preparation

The sodium sulfate is dried at 105 °C in a drying oven for 2 h and cooled down in a desiccator for at least 1 h.

Configuration

856 Conductometric Titrator including: 801 Magnetic Stirrer 800 Dosino, 1× 20 mL Dosing unit, 1× 5-ring conductivity cell $c = 0.7 \text{ cm}^{-1}$	2.856.1210
800 Dosino, 2×	2.800.0010
50 mL Dosing unit, 2×	6.3032.250
Titration vessel with thermostat jacket, 50 –150 mL	6.1418.250
Thermostat	Third-party device

Parameters

Mode	MET Cond
Stirring rate	8
Signal drift	0.1 (mS/cm)/min
Max. waiting time	28 s
Volume increment	0.1 mL
Evaluation	Without window
Smoothing	20

Results

Mean result (n = 4)

Titer	s(rel), n = 4
1.0524	0.41 %

Solutions

Titrant	$c(\text{Ba}(\text{CH}_3\text{COO})_2) = 0.1 \text{ mol/L}$ Approx. 25.5 g $\text{Ba}(\text{CH}_3\text{COO})_2$ is weighed into a 1 L volumetric flask and dissolved in deion. H_2O . The flask is then filled up to the mark with deion. H_2O .
Solvent	Acetone

Analysis

50 to 100 mg sample is weighed into the titration vessel. After the addition of 50 mL acetone and 50 mL deion. H_2O , the temperature of the solution is set to $25 \pm 0.2 \text{ °C}$. Afterwards, the solution is titrated with $c(\text{Ba}(\text{CH}_3\text{COO})_2) = 0.1 \text{ mol/L}$ until after the equivalence point.

www.metrohm.com

