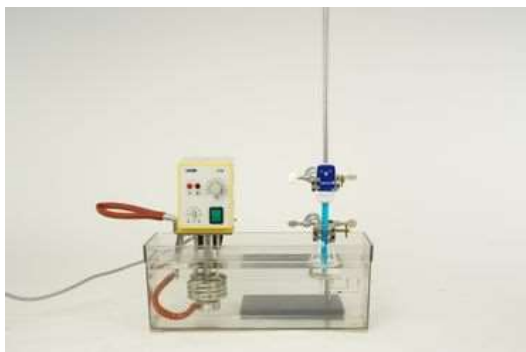


Solubility product with Cobra SMARTsense

Article no: P3030867



Principle

The solubility of poorly soluble salts is expressed as the solubility product, i.e. the product of the concentration of cations and anions in the solution which are in equilibrium with the solid salt. These concentrations can be determined via conductivity measurements.

Benefits

- Good and reproducible results due to temperature control in the experiment.
- The use of the compact Cobra4 Mobile-Link is space-saving.

Tasks

1. Measure the conductivities of saturated aqueous solutions of the salts calcium fluoride and calcium carbonate at 25 °C.
2. With the aid of tabulated ionic conductivities, calculate the solubility products of the salts from their conductivities.

Learning objectives

- Solubility
- Dissociation
- Electrolytic conductance
- Activity

Necessary accessories

- Precision balance 620g/0.001g

Software provided. Computer not included.

Scope of delivery

Cobra SMARTsense - Conductivity, 0...20000 $\mu\text{S}/\text{cm}$, 0...60°C (Bluetooth)	12922-01	1
Immersion thermostat Alpha A, 230 V	08493-93	1
External circulation set for thermostat Alpha A	08493-02	1
Bath for thermostat, makrolon	08487-02	1
Rubber hose	39282-00	3
Hose clip, diam. 8-16 mm, 1 pc.	40996-02	4
Retort stand, h = 750 mm	37694-00	2
Right angle boss-head clamp	37697-00	3
Universal clamp	37715-01	3
Magnetic stirrer without heating, 3 ltr., 230 V	35761-99	1
Magnetic stirring bar 30 mm, cylindrical	46299-02	2
Erlenmeyer flask, Boro, narrow neck	46141-00	4
Powder funnel, PP, d=120 mm	34472-00	1
Spoon, special steel	33398-00	1
Mortar w. pestle, 70ml, porcelain	32603-00	2
Weighing dishes, square shape, 84 x 84 x 24 mm, 500 pcs.	45019-50	1
Wash bottle, plastic, 500 ml	33931-00	1
Calcium carbonate 500 g	30052-50	1
Calcium fluoride, powder, purum, 100 g	31175-10	1
Standard solution 1413 $\mu\text{S}/\text{cm}$ (25°C), 460ml	47070-02	1
Water, distilled 5 l	31246-81	1
Tubing connector, ID 6-10mm	47516-01	2
measureLAB, multi-user license	14580-61	1