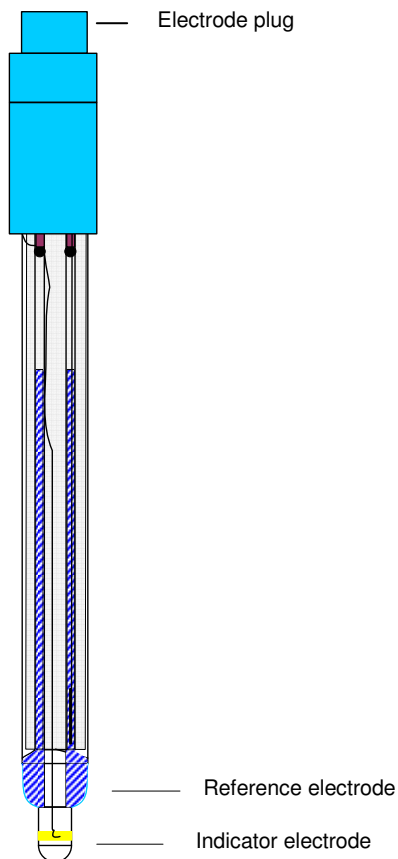


Instruction manual for metal glass combination electrodes for the titration



Range of application

The electrode is used for the equivalence point titration. Especially in cases in which the diaphragm is affected (clogging, contamination by sulphides...) the electrode is suitable.

Preparation

If there is an irrigation cap covering the sensor, it should be removed. It contains distilled water. The electrode is ready to perform a measurement.

Titration

For titration, please also note the instruction manual of the titrator.

To improve the signal-to-noise ratio the glass electrode, which serves as a reference, is connected to the central contact and the low resistance screen is in contact with the indicator electrode.

Titration conditions

During the titration, the pH value of the sample has to be stable. If necessary, the sample solution can be buffered.

Application

The sensors are suitable only for equivalent point titration only.

E. g.:

- Mercaptane, sulphides: AgS 62 -RG
- Halogenide: AgCl 62-RG, Ag 62-RG
- Redox: Pt 62-RG

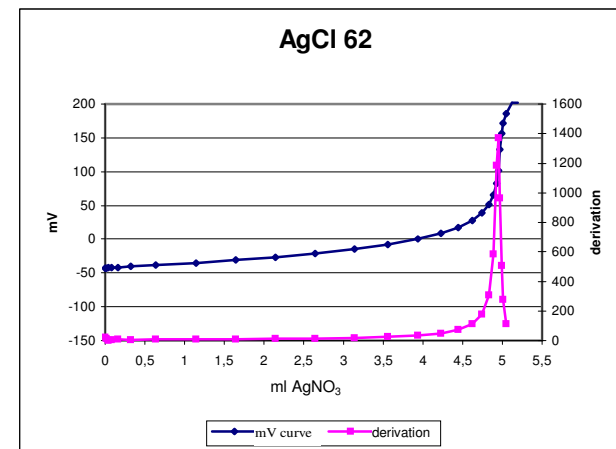
Benefits:

- Sensor without diaphragm, clogging not possible
- No refilling of electrolyte.
- The electrode is ready for use

Please note:

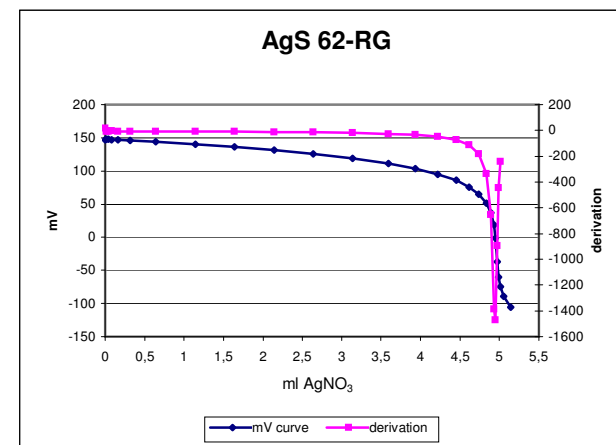
Compared to a conventional metal electrode (Pic.1) with reference electrode the potential curve for the titration with a metal glass combination electrode (Pic.2) is reversed.

Example curves



Pic.1

Comparative titration to 5 ml HCl with AgNO_3 0.1 mol/l with conventional silver electrode AgCl 62



Pic.2

Titration with coated AgS 62-RG, 5 ml HCl with AgNO_3 0.1 mol/l

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Storage

Electrodes should be stored at a temperature of between 0 und 40°C. Depending on storage conditions (temperature and air humidity), the irrigation fluid in the cap may dry out prematurely. In this case, the electrode must be irrigated for at least one hour in dist. water.

Care and cleaning

Dirt and contamination on the indicator electrode and on the reference electrode will lead to measurement inaccuracies.

- Wipe gently the **deposits** on the electrode with a damp cloth.
- **Organic contamination** can be removed with the aid of suitable solvents.
- **Grease** can be removed with tenside solutions or alcohol.
- **Proteins** can be removed with hydrochloric pepsine solution (cleaning solution L510).

After cleaning, rinse the electrode with distilled water.

Quality

Every electrode must meet the strict quality requirements of final testing. The durability depends mainly on the usage conditions. Extreme conditions include for example high or frequently fluctuating temperatures, strong acids or caustic solutions and cyanide solutions. Hydrofluoric acid and hot phosphoric acid corrodes glass.

Specifications

- Temperature range: -5 ... +100 °C
- Length: L = 120 mm
- Indicator electrodes: Pt-Ring Ø12 mm, (optional) Pt-Ring Ag coated Pt-Ring AgCl coated Pt-Ring Ag₂S coated
- Reference electrode: pH glass electrode
- Coaxial plug for connection cables e.g.: L 1 A, L1BNC, L1R
- Temperature sensor: no

Order No.

285102100	AgCl 62-RG
285102090	Ag 62-RG
285102110	AgS 62-RG
285102070	Pt 62-RG
285122456	Cable L1A

Further Information

Further information can be found in the laboratory catalogue of SI Analytics GmbH.

Subject to technical amendment.