Titration Sensors

Versatile and Reliable Oil Titration

Plug & Play Titration Electrodes

Secure handling thanks to the Sensor Chip

Connect the Plug & Play sensor to the Excellence titrator and it is automatically recognized and ready for use. Electrode type, serial number, calibration data and validity period as well as working life stored in the Sensor Chip are automatically read-in. Errors are eliminated.

Reliable and fast TAN/ TBN determinations

The large round glass bulb of the DGi116-Solvent provides fast and sensitive pH response. The sliding glass sleeve promotes quick signal equilibration and is easy to clean. The gold shield for the inner glass half cell provides perfect electrical and static shielding.

Versatile silver ring electrodes

Forget clogging diaphragms with silver sulfide using the DMi148-SC with glass pH bulb reference or benefit from the fast response and easy-to-clean sleeve junction of the DMi145-SC – versatile electrodes to determine chloride, sulfide and mercaptans in oil matrices.

Precision with ease

The requirements of global oil standards such as ASTM, IP or DIN are easily fulfilled thanks to the innovative electrode design and the clever titration control of the Excellence titrators. With the Rondo sample changer and LabX titration software the complete workflow from sample preparation to result management can be automated.

The new Plug & Play sensors for oil titrations

Safely located in the electrode head, the Sensor Chip of the new pH and metal electrodes stores all relevant sensor data. The sensor is unambiguously recognized by the Excellence titrator for immediate use. You are always sure that you are using the correct electrode in proper condition. The design of all electrodes such as sensing part and reference system has been optimized towards fast response and signal equilibration as well as ruggedness and durability especially in non-aqueous media.

METTLER TOLEDO

Selected Plug & Play sensors for titrations in Petrochemical Industry

Electrode	Description	Features	Application examples
DGi116-Solvent	Plug & Play combined glass pH electrode with a movable easy-to-clean sleeve junction for acid/base titrations in non-aqueous media.	• Sensor Chip • Movable glass sleeve junction • ARGENTHAL™/LiCl reference system • Refillable reference electrolyte: 1 mol/L LiCl in Ethanol • High performance gold shielding against electrostatic effects • Spherical glass membrane of low resistance	• Acid number determination according to ASTM D664-06a – e, IP177, DIN EN12634 • Base number determination according to ASTM D4739-06a, IP 276, DIN ISO 3771 • Basic nitrogen in mineral oil
DMi145-SC	Plug & Play combined silver ring electrode with a movable easy-to-clean sleeve junction for precipitation titrations in dirty or viscous samples	• Sensor Chip • Movable PTFE-sleeve junction • Pure silver ring sensing element • Ag/AgCl/KNO_3 reference system • Refillable reference electrolyte (1 mol/L KNO_3)	• Chloride in crude oil
DMi148-SC	Plug & Play combined silver ring electrode for precipitation titrations at constant pH.	• Pure silver ring sensing element • Maintenance-free reference system (bulb pH glass membrane)	• Determination of mercaptan sulfur according to ASTM D3227, IP272, ISO 3012 • Determination of chloride in oil
DM405-SC (only classical variant available)	Combined Ag_2S-sulfidized silver billet electrode for precipitation titrations	• Annular ceramic junction • Ag_2S-sulfidized silver ring sensing element • Ag/AgCl/KNO_3 reference system • Refillable reference electrolyte (1 mol/L KNO_3)	• Determination of mercaptan sulfur according to ASTM D3227, IP272, ISO 3012
DG300-SC (only classical variant available)	Glass half cell pH electrode for acid/base titrations for non-aqueous matrices in conjunction with reference electrode DX200	• Large spherical glass membrane • Movable sleeve adapter for position adjustment	• Acid number determination according to ASTM D664

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