

Automatic-Intelligence Karl Fischer Titration Tester (Volumetric Method)

There is always a little water in organic liquid, solvent and solvent based paint or ink, but it would be able to affect the whole quality of coatings. Using Karl Fischer Titration to determine free water and water of hydration in most solid or liquid organic and inorganic compounds is general method in chemical field.

The sample, containing a maximum of 100 mg of water, is dissolved or dispersed in a suitable liquid and titrated with KF reagent, which consists of iodine, sulfur dioxide, organic base, and a solvent (typically an alcohol, such as methanol, ethylene glycol, or 2-methoxyethanol). The titration end point is determined potentiometrically with a platinum electrode which senses a sharp change in cell resistance when the iodine is reduced by sulfur dioxide in the presence of water.

BGD 231 Automatic-Intelligence Karl Fischer Titration Tester, consisting of a titration cell, dual platinum electrode, magnetic stirrer, dispensing buret and control unit, is the latest instrument developed by Biuged with independent intellectual property rights. It uses the newest mechanical and electronic design technology and user-friendly interface operation. Compared with the last version, it has higher measurement accuracy, wide measurement range, simple operation, durability, and reliability. It can be widely used for the precise determination of crystalline water, adsorbed water, and free water in solvent-based coatings, inks, adhesives, solvents, and other chemical products.

- ◆ Complies to ISO 760, ISO 6296, ASTM E203
- ◆ Compatible with various Karl Fischer reagents, automatically replaces solvents and discharges waste liquids to prevent the escape of toxic reagents.
- ◆ The titration cell, solvent bottle, and reagent bottle are all equipped with drying tubes. The pipeline joints and seals are made of corrosion-resistant materials to prevent the infiltration of environmental moisture.
- ◆ Absorb solvent and discharge waste liquid automatically, titrate automatically, keep titration end point automatically, calculate and analyze results (consumption amount of reagent, water mass, percentage, ppm) automatically.
- ◆ Show titration curve, deducting blank values
- ◆ Status lights indicate whether the instrument is working or ready. Calibration, sample measurement, and test results are saved automatically.
- ◆ Stepless speed-adjustable stirring reaction vessel for more thorough titration.
- ◆ The instrument automatically tracks environmental water drift during idle time and selects drift deduction during result calculation to ensure accurate analysis results
- ◆ Adjusts the titration liquid speed automatically during titration based on the water content in the titration cell, displaying real-time titration liquid volume, titration speed, and electrode signal during the titration process.
- ◆ In-built stylus printer

Main Technical Parameters:

- ★ Theoretical Measurement Range: 0.001% ~ 100%
- ★ Optimal Measurement Range: 0.01% ~ 100%
- ★ Titration Accuracy: 1.0 μl
- ★ Repeatability: ≤0.5% (20 mg water)
- ★ Resolution: 1ppm
- ★ Storage: 100 groups for titration data; 5 groups for calibration records; 5 groups for test methods.
- ★ Power Supply: 110V ~ 240V/50HZ ~ 60HZ
- ★ Overall Size/Weight: 450mm × 400mm × 400mm/5.5KG
- ★ **Ordering Information:**

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Note: Use Karl Fischer Titration Tester to measure trace water content of solvents or paints, anhydrous methanol and Karl Fischer reagents are necessary. Biuged don't offer these reagents because of delivery problems. Customers can buy it from local suppliers of Chemical reagents.