

Application Memo

Factor Determination on Karl Fischer Reagents (with Water Standard)

Instrument	Karl Fischer moisture titrator
Measurement method	Volumetric titration
Standards	JIS K 0113, ISO 760, ASTM E203

1. Overview

Moisture titration with Karl Fischer reagent is the most reliable moisture measurement method in the world. The procedure is adopted in many official standards as test method specified in ISO, ASTM, DIN, BS and JIS.

In KF measurement, it is necessary to determine the factor (or titer) of KF reagents using standard substances before actual measurements. The example in this application note shows the factor determination with commercially available Water Standard 10.

2. Apparatus

Main unit	Karl Fischer moisture titration volumetric system
Electrode	Twin platinum electrode

3. Reagents

Titrant	HYDRANAL™ Composite 5
Solvent	HAYASHI™ Solvent ML

4. Example

—Measurement results—

Run	Size Wt1–Wt2 (g)	Vol. (mL)	Factor (mg/mL)	Statistics	
				Mean	SD
1	1.0183	2.015	5.054	5.040 mg/mL	0.033 mg/mL
2	0.9977	1.970	5.065		
3	0.9954	1.990	5.002	RSD	0.66 %

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