

Application Memo Water Content in Ether

Industry	Organic chemical industry
Instrument	Karl Fischer moisture titrator
Measurement method	Volumetric titration (Direct method)
Standards	JIS K 0113, ASTM E 203, ISO 760

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.

Here in this application note, we measure water content in ethers by direct method of KF titration according to JIS K 0113. The ethers are easy to dissolve in the following solvent.

2. Apparatus

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

3. Reagents

Titrant	KEMAQUA titrant TR-3
Solvent	KEMAQUA solvent MET for general

4. Example

— Measurement results —

Sample name	Water content	
	mg	%
Diethyl ether	3.57	0.05
Tetrahydrofuran	1.32	0.015
Ethylene glycol monoethyl ether	3.62	0.039
2-methoxy ethanol	0.99	0.011

Sample name	Water content	
	mg	%
1,4-dioxane	1.14	0.011
Isopropyl ether	0.15	0.002
Ethylene glycol monobutyl ether	3.78	0.042

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