

Application Memo
Water Content of Ether (2) [Long-chain Ether]

Industry	Petrochemicals
Instrument	Karl Fischer Moisture Titrator
Measurement method	Volumetric titration
Standards	JIS K 0113, ASTM E 203, ISO 760

1. Overview

Moisture titration using Karl Fischer reagent is popularly practiced water determination worldwide as the most reliable method. The procedure is adopted in many official standards as test method specified as in ISO, ASTM and JIS, etc.

Here in this application note, we measure water content of long-chain ether by direct method of KF titration according to JIS K 0113-2005 as quoted below. The long-chain ethers in general are hard to dissolve in methanol. Therefore, we use KET solvent mixed with chloroform.

The test samples we measured according to the above method are as follows:
Allyl glycidyl ether/Propylene oxide/Vinyl oxide

2. Apparatus

Main unit	Karl Fischer moisture titration volumetric system
Electrode	Twin Platinum Electrode

3. Reagents

Titrant	KEMAQUA TR-3
Solvent	KEMAQUA Solvent KET for Ketone

4. Example**—Measurement results—**

Sample name	Water content	
	mg	%
Allyl glycidyl ether	4.07	0.079
Propylene oxide	2.05	0.026
Vinyl oxide	3.00	0.016

Please feel free to contact us for any further information.
<Contact> Kyoto Electronics Manufacturing Co., Ltd.
Overseas Sales & Marketing Sect.
<http://www.kyoto-kem.com/en/contact/form.php>