

Application Memo

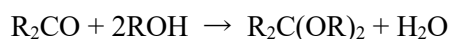
Water Content in Ketone (1)

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, we measure water content of ketone by direct method of KF titration according to JIS K 0113. The ketones induce side reaction of generating water with alcohol like methanol.



However, the side reaction can be avoided by titration with commercially sold solvent for ketone.

2. Apparatus

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

3. Reagents

Titrant	KEMAQUA titrant TR-3
Solvent	KEMAQUA solvent KET for ketone

4. Example

—Measurement results—

Sample name	Max volume	Water content	
		mg	%
Acetone	10mL	2.53	0.06
Methyl-n-propylketone	10mL	1.10	0.22
Methyl isobutyl ketone	10mL	3.73	0.04
Ethyl isobutyl ketone	10mL	8.67	0.39
Allyl acetone	10mL	3.78	0.19

Sample name	Max volume	Water content	
		mg	%
2-pyrrolidone	10mL	3.77	0.06
N-methyl-2-pyrrolidone	10mL	1.15	0.02
2-benzoylpyridine	10g	0.45	0.02
3-acetylidole	2g	1.73	0.34
Diacetyl	1mL	0.48	0.10

Please feel free to contact us for any further information.

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