

Application Memo

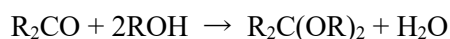
Water Content of Aldehyde

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 aldehyde by direct method of KF titration according to JIS K 0113. The aldehydes induce interference reaction that generates water with alcohol like methanol.



Aldehydes can cause interfering reactions that take water away.



However, these interference reactions can be avoided by titration with solvent for ketone.

2. Apparatus

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

3. Reagents

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

4. Example

—Measurement results—

Sample name	Max vol.	Water content		Sample name	Max vol.	Water content	
		mg	%			mg	%
Benzaldehyde	5mL	2.62	0.13	2-Anizic aldehyde	10mL	0.76	0.04
2-Bromobenzaldehyde	2mL	0.54	0.10	3-Hydrozylbenzaldehyde	5g	1.46	0.22
4-Dimethylamino-benzaldehyde	10g	0.36	0.02	Phenyl glyoxal	0.5g	1.13	1.00

Please feel free to contact us for any further information.

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