

Application Memo

Moisture in Medicines (1)

Industry	Pharmaceutical
Instrument	Karl Fischer moisture titrator
Measurement method	Volumetric titration (Direct Method)
Standards	JIS K 0113, ASTM E 203, ISO760

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 in medicines by direct method of KF titration according to JIS K 0113. The samples dissolves in the solvent with ease.

2. Apparatus

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

3. Reagents

Titrant	KEMAQUA titrant TR-3 and TR-5
Solvent	KEMAQUA solvent MET for general

4. Example

㊦ Measurement results

Sample name	Water content		Sample name	Water content	
	mg	%		mg	%
<u>Aminophyline</u>	22.51	7.48	Thiamin hydrochloride	20.08	3.96
2-propanol	0.81	0.010	Oxyphenbutazone	27.40	5.31
Quinine ethylcarbonate	10.97	2.05	Citric acid anhydride	0.69	0.034
Ethosuximide	1.10	0.056	Cyclophosphamide	32.65	6.48
<u>Suxamethonium chloride</u>	39.14	9.48	<u>Distigmine bromide</u>	3.72	0.330
Berberine chloride	38.72	12.53	Methotrexate	21.75	10.26
Benzalkonium chloride	37.50	7.94	Folic acid	26.95	8.37
Dextromethorphan hydrobromide	10.87	5.41			

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