

Application Memo

Moisture Determination in Food Additive and Sugars

Industry	Food and beverage
Instrument	Karl Fischer moisture titrator
Measurement method	Volumetric titration (Direct method)
Standards	JIS K0113, ASTM E203, 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 in the samples by direct method of KF titration according to JIS K 0113. Some sample may not dissolve in the solvent, but measurement can be performed without problem.

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 SA for sugar

4. Example

Sample	Moisture content		sample	Moisture content	
	mg	%		mg	%
Chemical seasoning	24.83	10.82	Honey	19.97	18.27
Yeast extract	8.99	4.60	Soluble coffee	18.00	3.53
Soup base	3.79	2.66	Hot chocolate	12.12	2.43
5-sodium inosinate	46.63	24.54	Juice	47.03	42.38
Glucose (anhydrous)	4.51	0.42	Yogurt	66.20	72.11
Glucose (hydrous)	21.37	8.15	Condensed milk	58.76	25.70
fructose	21.29	27.36	Powder sugar	2.87	0.21
Chocolate	2.94	2.30	Galactose (anhydrous)	2.31	0.23
Starch syrup	42.05	26.48	β -cyclodextrin	1.25	1.88

Please feel free to contact us for any further information.

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