

<i>Category</i>	<i>Volumetric Karl Fischer Titrator AQV series</i>
Food & Beverage	Water content in butter oil by Volumetric Karl Fischer Titration

Referenced methods

Key words; butter oil, ingredients for sweets, Volumetric Karl Fischer titration

Outline

Water in butter oil can be determined by direct volumetric Karl Fischer titration. Using a mixture of methanol and chloroform as solvent is recommended to help the sample dissolved well in to the solvent for more accurate measurements.

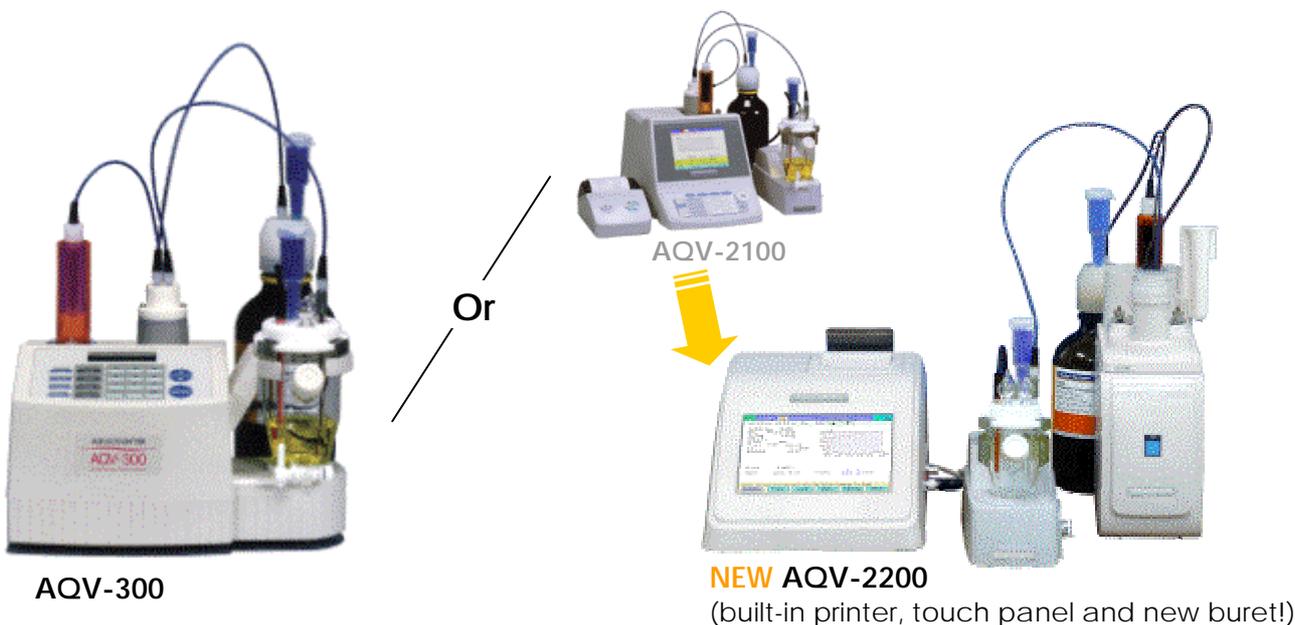
Reagents

Titrant	Hydranal® Composite 5
Solvent	Hydranal® LipoSolver CM (Mixture of dry methanol and chloroform)

Hydranal® KF reagents are available from Sigma-Aldrich www.sigma-aldrich.com/hydranal

Instruments

KF Titrator	NEW AQV-2200 (Color touch panel/ more functions) or AQV-300 (Simple & Compact)
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Procedure

Standardization of Composite 5

Add 50mL of solvent to the titration cell. Perform blanking to eliminate water contained in the solvent. Load pure water in a syringe and accurately weigh it (S₁). Press **SAMPLE** key and inject two drops of the water into the cell, and then press **TITRATION** key. Weigh the syringe again (S₂) to calculate the weigh of the water added by subtracting S₂ from S₁. Repeat the above steps three times. The mean value will be the factor of the titrant.

Measurement

Warm the sample with hot water at 40°C.

Flush a syringe with the sample several times and then load it with about 3mL of the sample. Accurately weigh the syringe plus content (S₁).

Press **SAMPLE** key and inject the sample into the cell.

Press **TITRATION** key to start a titration.

Weight the syringe again (S₂) to obtain the weight of the sample added, and enter the value.

Condition parameters

	Standardization	Measurement
Cal Mode	7	0
Interval Time	30 sec	15 sec
S-Timer	0	1 min.
T-Timer	0	0
Buret Speed (OUT)	10 mL/min	10 mL/min
Buret Speed (IN)	24 mL/min	24 mL/min
Blank Value	0	0
Cal Factor Tit. Buret No.	1	1
Buret 1 Factor	-	Result of Std
Unit Mode	-	AUTO
Back Ground	OFF	OFF
Min. Feed Vol.	0.01 mL	0.01 mL
Max Volume	20 mL	20 mL
CP Level	150 mV	150 mV
End Mode	4	4
Factor Set Mode	ALL	-
Auto Interval	0 g	0 g

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