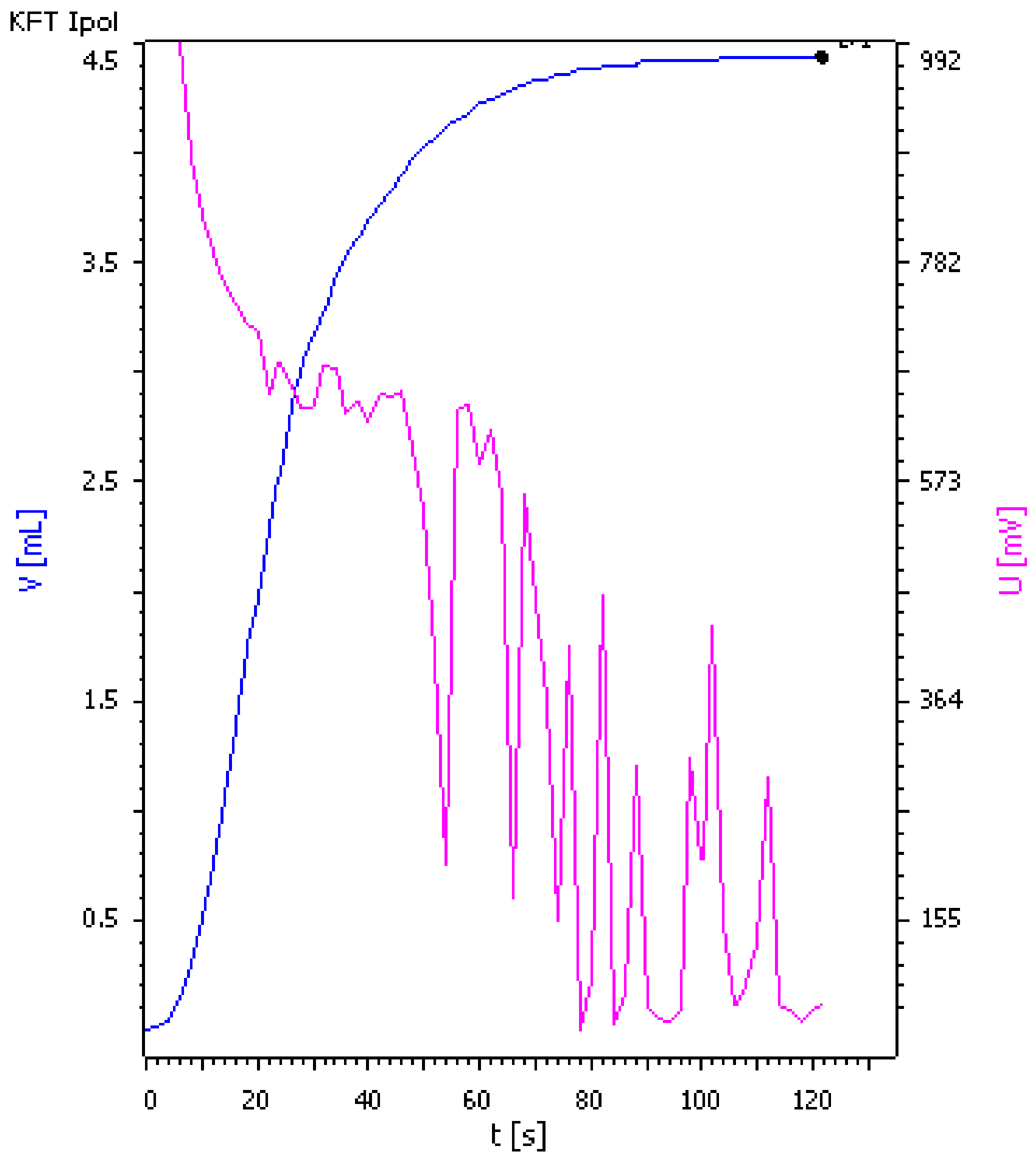
KF Application Note K-51

Determination of the water content in spirit with MATi 10



This Application Note describes the automated determination of the water content in liqueur using volumetric Karl Fischer titration (MATi 10).

Method description

Sample

Liqueur 30% (v/v)

Sample preparation

Due to the high water content, the sample is diluted with methanol. For the dilution, the same methanol as for the blank determination is used. Using a syringe to dose the sample, 0.302 g of sample are weighed into a flask and 200 mL of methanol added. After mixing, an aliquot of 20 mL is automatically dosed from the flask into the titration beaker using a Dosino and a Dosing unit. The 20 mL of diluted sample correspond to 0.0302 g of pure sample.

Electrodes

Double Pt electrode	6.0340.000

Reagents

HYDRANAL®-Water Standard 10.0	Fluka 34849
HYDRANAL®-Composite 5	Fluka 34805
HYDRANAL®-Methanol dry	Fluka 34741

Instrumentation

MATi 10 system	

Analysis

System preparation

To prepare the system, a blank value is run and the result discarded.

Blank determination

Three blank values are determined using empty titration beakers and 20 mL of a methanol. The mean value is saved as Common variable and subtracted from the endpoint volumes of all subsequent determinations (titer and sample).

Sample determination

Using Dosino and Dosing unit, 20 mL of diluted sample are automatically added and the determination is carried out.

Parameters

Except for the calculation, the parameters for all methods are identical.

The following parameters are changed compared to the default values.

Pause 1	8 s
Extraction time	30 s

Results

Blank determination

Mean / [mL] (n = 3)	RSD / [%]
2.9613	0.7

Sample determination

Mean / [%] (n = 6)	RSD / [%]
49.92	0.7