KEM Application Note No. EKCR-110726

Coulometric Karl-Fischer Titration

Kyoto Electronics Manufacturing Co., Ltd.

Data No. LN38-110726

Moisture of Ethanol

-Summary-

Checked the possibility of measuring moisture of Ethanol with MKC-501 and good repeatability was obtained.

-Measuring instrument-

Main unit:	MKC-501	Coulometric KF moisture titrator
Electrode:	M-713	Twin platinum electrode
	#433-0006	Inner burette

-Reagent-

Anolyte:	Coulomat AG
Catholyte:	Coulomat CG

-Measurement method-

Preparation:

(1) Fill the titration cell with the anolyte and the inner burette with the catholyte.

(2) Pretitrate for dehydration.

Measurement:

(1) Place about 0.5mL sample in the titration cell with syringe for the moisture measurement on the sample.

-Equation-

Moisture (%): ((Data-Drift×t-Blank)/(Wt1-Wt2))×F

Data : Measured water content (μg)
Drift : Drift before measurement (μg/s)
t : Measuring time(s)
Blank : Blank value (μg)
Wt1 : Tare including sample weight (g)
Wt2 : Tare including residual weight (g)
F : Factor (1.00)

-Standard method-

Karl Fischer method

-Ambient conditions-

Temperature: 26 °C R. Humidity: 41 % Weather: Fine

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-Measurement parameter-

[Titration]

t(stir)	0 s
t(wait)	15 s
t(max)	0 s
Drift Stop :	rel
Rel(ug/s)	0.1

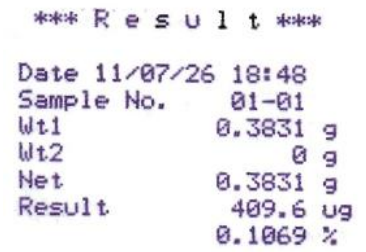
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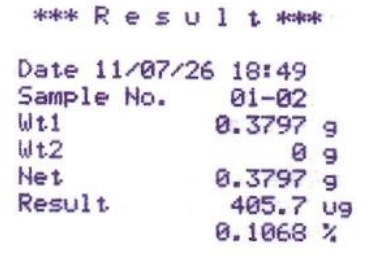
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Weight	:	Var
Drift Comp.	:	auto
Blank:	:	0

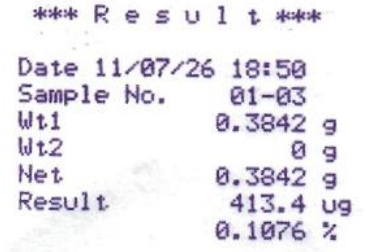
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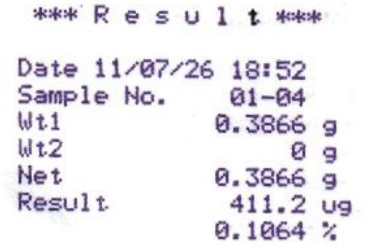
Short

-Printout data-









-Measurement results-

Run	Sample size (g)	Moisture (µg)	Concentration (%)
1	0.3831	409.6	0.1069
2	0.3797	405.7	0.1068
3	0.3842	413.4	0.1076
4	0.3866	411.2	0.1064

Statistics	
Mean	0.1069 %
SD	0.0005 %
RSD	0.4668 %

-Comments-

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