

Coulometric Karl-Fischer titration

Kyoto Electronics Manufacturing Co.,Ltd.

Data No. NB47-14175

Moisture of polyethylene tephthalate (PET)

-Measuring instrument-

Main unit: MKC-520 Coulometric KF moisture titrator
Option: ADP-511S Evaporator
Electrode: M-713 Twin Pt electrode
#103-3408 Inner burette

-Reagent-

Anolyte: Coulomat AG
Catholyte: Coulomat CG
Carrier gas: Nitrogen

-Measurement method-

Preparation:

- (1) Delivered anolyte in titration cell and catholyte in inner burette.
- (2) Pretitrated for dehydration.
- (3) Connected MKC-520 and ADP-511S, and set the evaporation temperature to 230°C.

Measurement:

- (1) 0.2g sample was taken in and titrated for measurement.

-Equation-

Moisture (%): $((\text{Data}-\text{Drift} \times t-\text{Blank})/(\text{Wt1}-\text{Wt2})) \times F$

Data: Total water content (μg)

t : Measuring time (s)

Wt1: Tare included sample weight (g)

Drift: Drift ($\mu\text{g/s}$)Blank: Blank value (μg)

Wt2: Tare included residual weight (g)

F=1.00: Factor

-Measurement parameter-

[Titration]

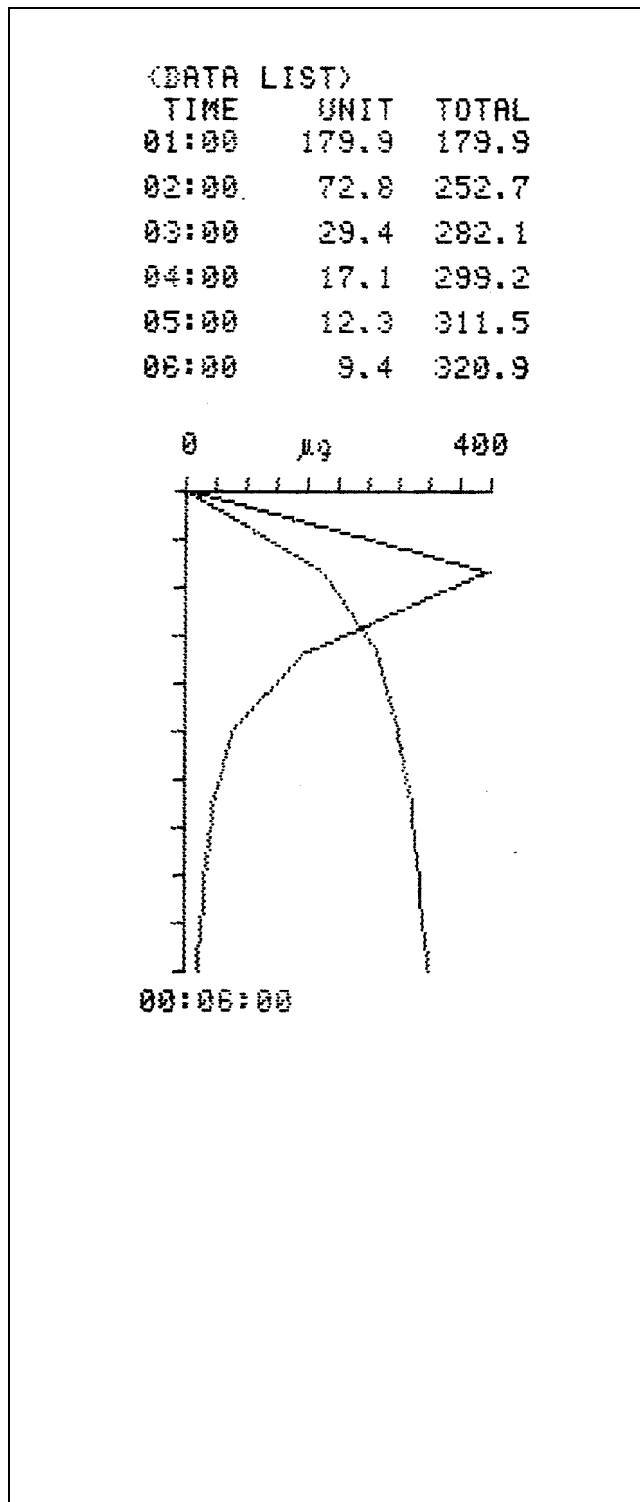
Method 4
 D.Time 10 s
 L.Time 1800 s
 Cont.Gain 5.0
 End Level : On
 0.1 ug/s
 Stable 0.1 ug/min
 Blank On
 Start : Manual
 Oven : On
 Oven Temp. 230 ° C
 Pre Treat Form 2
 Back Purge 180 s
 Cell Purge 120 s

[Calculation]

Calc. No. 2
 Unit : %
 Size Weight : Variable
 Balance : Manual
 Size Only : Off

[Data List]

P.Time 60 s
 Data List : On
 Graphic Form : Form 2

-Printout data-**-Measurement results-**

	Sample size (g)	Conc. (%)
First	0.1999	0.1628
Second	0.2031	0.1597
Third	0.1965	0.1659

Statistics	
Mean	0.1628 %
SD	0.0031 %
RSD	1.9042 %