HIRANUMA

Karl Fischer Titrators
"AQ/AQV Series"

Advanced Model "AQ/AQV-2200A"

WE CAN

10 ppm ~ 100 %!

Detect wide range water content!
Regardless of sample state!

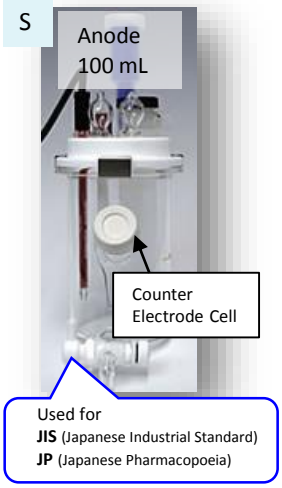
Liquid, Solid, Gas!

HIRANUMA

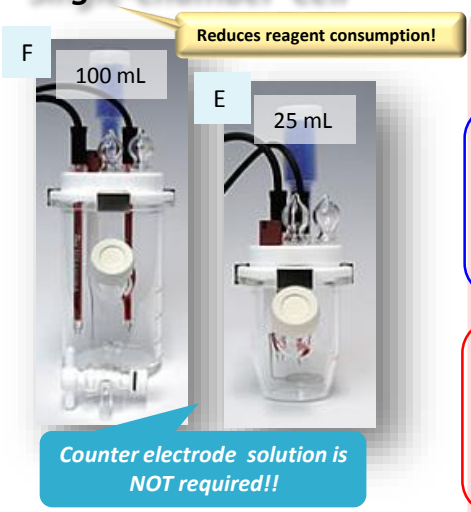
Application Note

Comparison between Standard (2-Chamber)Cell and Single-Chamber Cell on Coulometric KF Titrator

Standard Cell



Single-Chamber Cell



Statistical calculation results (n = 3)

	Water Standard	Toluene	Cleaning solvent
Standard Cell			
Mean.	**996.0 ppm**	**53.5 ppm**	**568.5 ppm**
SD	1.0 ppm	0.2 ppm	1.8 ppm
RSD	0.10 %	0.43 %	0.3 %
Single-Chamber Cell			
Mean.	**997.0 ppm**	**52.7 ppm**	**571.1 ppm**
SD	0.7 ppm	0.5 ppm	3.4 ppm
RSD	0.07 %	0.94 %	0.6 %

*F&E cannot be used for nitro compounds samples.

Almost identical results!

Water content in Lubricant

AQ-2200AS Coulometric KF Titrator + EV-2000L Oil Evaporator

Distillation solvent toluene and N_2 carrier gas are used.

KF Coulometric + Azeotropic distillation method

Procedure

1) Add toluene into the evaporation chamber and heat at 120 °C to remove the water.

2) Inject the lubricant sample into the toluene and heat to evaporate water from the sample.

3) The water introduced into the KF cell by N_2 gas is coulometrically measured.

Results

No.	Sample Size (g)	Water Content (ppm)	Statistical calculation results	
1	1.4552	172.1	Mean.	170.5 ppm
2	1.6188	167.5	SD	2.6 ppm
3	1.6799	172.0	RSD	1.5 %

Exporter

Hitachi High-Tech Science Corporation
www.hitachi-hightech.com/global/hhs/
Head Office
24-14, Nishi-Shimbashi 1-chome, Minato-Ku,
Tokyo, 105-0003, Japan

Manufacturer

Hiranuma Sangyo Co., Ltd.
www.hiranuma.com/english/index.html
1739, Motoyoshida, Mito, Ibaraki, 310-0836, Japan
info-f@hiranuma.com

Contact