

KF Application Note No. K- 12

Title: Water in turbine oil

Summary: The water content of turbine oil is determined according to Karl Fischer. Because of the low water content of the sample coulometric titration is used.

Sample: Turbine oil

Sample Preparation: none

Instruments and Accessories: 737 KF Coulometer, cell with diaphragm, 728 Magnetic Stirrer, printer

Analysis: Fill 105 mL Coulomat AG-H and 45 mL chloroform into the anode compartment of the measuring cell and condition until the drift is steady and below 10 ug/min. Prior to each injection rinse the syringe with 5 mL sample. Inject 4 ... 5 g sample into the cell (the exact sample mass is determined by difference weighing) and start the automatic titration. After each determination the cell is conditioned for about 5 min to make sure that the drift is steady again before starting the next analysis. After several injections the stirrer is switched off for 5 min and the upper oil phase is aspirated using a 20 mL syringe.

Reagents:

Hydranal Coulomat AG-H and Hydranal Coulomat CG (Riedel-de Haën)
Chloroform, analytical grade

Results: AVG(15) = 36.1 +/- 0.4 ppm water

Settings: 737 KF Coulometer

smpl.req:	on
d.start	20 ug/min
extr.	0 s
stop drift:	auto
delay time	3 s
report:	full