



Thermo

ELECTRON CORPORATION

Potentiometric Titration Application Notes

Applications Log # 469

Overview The bromine index of a sample is the number of milligrams of bromine that will react with 100 g of sample under the conditions of the test. This was determined using the first derivative technique with an Orion double platinum electrode, and potassium bromide/bromate as the titrant. The Orion 960 titrator PLUS determines the endpoint and calculates the bromine index of the sample.

Industry	Petroleum and Refining
Species Measured	Bromine Index
Sample	Petroleum Hydrocarbons
Sample Size	12g
Typical Concentration	275...(w)
Technique	# 6 First Derivative
Electrode	Double Platinum Redox 977900
Solutions	0.025N Bromide/Bromate; 0.5N Bromide/Bromate; H ₂ SO ₄ ; HOAc; trichloroethane; methanol
Sample Prep	Accurately pipette 50 mL of titrant. Solvent into a beaker. Place beaker on a balance and tare. Pipette appropriate amount of sample into beaker and immediately record the weight. Sample is now ready for analysis.

Statistics

# of Trials	4	Mean	274.94...(w)	%CV	0.97
Analysis Time	4.0minute(s)				
Comments	Rinse the electrodes, stirrer, and dispenser probe between measurements with deionized water.				