



Thermo

ELECTRON CORPORATION

Potentiometric Titration Application Notes

Applications Log # 493G

Overview The concentration of available oxygen in oxidizing agent was determined by the first derivative technique utilizing potassium permanganate as the titrant. The Orion 960 Titrator PLUS determines the endpoint and calculates the sample concentration.

Industry	Chemical Industry
Species Measured	Available oxygen
Sample	Oxidizing agent
Sample Size	1.0 g
Typical Concentration	20% w/w
Technique	# 6 First Derivative
Electrode	Double platinum redox electrode 977900.
Solutions	15% Sulfuric acid, Sodium oxylate (pure - in dry form).
Sample Prep	Accurately weigh 1.0 g of sodium oxylate in a 150 mL beaker. Add 100 mL of 15% sulfuric acid. Add 0.6-0.7 g of sample to beaker and heat approximately ten minutes (until yellow color is formed). Stir continuously. Accurately pipette 20 mL of solution into a 180 mL beaker. Add deionized water to electrode level. Sample is now ready for analysis.

Statistics

# of Trials	5	Mean	19.37%	%CV	2.44
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Analysis Time 5.1 minutes

Comments Rinse the electrodes, stirrer, and dispenser probe thoroughly between measurements with deionized water.