



Thermo SCIENTIFIC

Potentiometric Titration Application Notes

Applications Log # 494B

Overview

The concentration of anionic surfactant was determined by the first derivative titration technique utilizing Orion non-ionic standard as the titrant. The Orion 960 Titrator PLUS determines the endpoint and calculates the sample concentration.

Market	Consumer Products	Species Measured	Anionic surfactant
Sample	Aqueous solution	Sample Size	2.5 g
Technique #	6 First Derivative	Typical Concentration	20.0% w/w
		Electrode	Surfactant electrode 9342BN. Double Junction electrode 900200

Solutions Non-ionic reagent (cat# 654204), Electrode filling solution (cat# 90002, 900003).

Sample Prep Accurately weigh 2.5 g of sample in a 500 mL volumetric flask, fill to mark with deionized water and stir. Pipette a 20 mL aliquot into a 150 mL beaker. Add 5 mL of non-ionic reagent and deionized water. Sample is then ready for analysis.

Statistics

of Trials 3 **Mean** 20.66 % w/w **%CV** 3.96 **Analysis Time** 9.8 minutes

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

Method Parameters

Sample Volume/Weight	0.1 g	Timed or Stability Readings	10.0 mV/min stability
Constant Increment	0.203 mL	Number of Endpoints	1
Max Titrant Volume	5.0 mL	Desired Units	% w/w
Molecular weight	250.0 g	Predose	
Prestir	20.0 second(s)ond	Additional Parameters	
Reaction Ratio	1.00		