



# Thermo

ELECTRON CORPORATION

Potentiometric Titration Application Notes

Applications Log # 637B

## Overview

The percent sodium oxide and aluminum oxide in sodium aluminate was determined by the Orion 960 Titrator PLUS using the "Sequencing" procedures that linked two first derivative techniques. 1M hydrochloric acid and 1 M sodium hydroxide were used as the titrants.

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<b>Industry</b>	Chemical
<b>Species Measured</b>	Aluminum Oxide
<b>Sample</b>	Sodium Aluminate
<b>Sample Size</b>	2.0g
<b>Typical Concentration</b>	25-27%w/w
<b>Technique #</b>	Sequencing
<b>Electrode</b>	Sure-Flow pH electrode 810200
<b>Solutions</b>	1.0M HCl. 1M NaOH. 33% potassium fluoride solution. 25% sodium gluconate solution
<b>Sample Prep</b>	Sample, 50mL, DI 50mL Na gluconate. Titrate w/ HCl to endpoint. Stop at 50mL. Add 60mL KF. Titrate w/ NaOH.

## Statistics

<b># of Trials</b>	3	<b>Mean</b>	23.64%w/w	<b>%CV</b>	0.19
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**Analysis Time** 10.0minute(s)

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

## Method Parameters

<b>Sample Volume/Weight</b>	<b>Timed or Stability Readings</b>
<b>Constant Increment</b>	<b>Number of Endpoints</b>
<b>Max Titrant Volume</b>	<b>Desired Units</b>
<b>Molecular weight</b>	<b>Predose</b>
<b>Prestir</b>	<b>Additional Parameters</b>
<b>Reaction Ratio</b> 1.00	