



Potentiometric Titration Application Notes

Applications Log # 459

Overview

The concentration of sodium was determined by a Thermo technique called KAP Analysis. Aliguots of sodium standard are added automatically to a sample containing an Orion sodium electrode. The Orion 960 Titrator PLUS calibrates the electrode and calculates the concentration.

Market Food and Beverage Sodium Species Measured

Breading Mix 1.5g Sample Sample Size

> **Typical Concentration** 7mg/g

Technique # Multiple Known Addition Electrode Ross Sodium 8411BN; Ross Ref

800300

Na Reconditioning Solution. 841113; Na ISA 841111; Electrode fill 900010; Na electrode storage **Solutions**

solution 841101

Sample Prep Accurately weigh about 1.5 g of breading into an analysis beaker. Pipet 100 mL of deionized water

and 10 mL of sodium ISA into the beaker. Sample is now ready for analysis.

Statistics

6 # of Trials Mean 7.348mg/g %CV 1.68 **Analysis Time** 3.0minute(s)

Comments Rinse the electrodes, stirrer, and dispenser probe between measurements with prepared wash

solution.

Method Parameters

Sample 1.5 g Timed or Stability 10.0 mV/min stability Volume/Weight

Readings

Number of Endpoints Constant Increment 18.0 mV

Max Titrant Volume 10.0 mL **Desired Units** % w/w

Molecular weight 22.99 g Predose none

> Prestir 120.0 second(s) Additional Total Solution Volume = 110.0 mL,

Parameters Precision = 2.0% Reaction Ratio 1.00