



Thermo

ELECTRON CORPORATION

Potentiometric Titration Application Notes

Applications Log # 568

Overview The concentration of calcium hydroxide was determined by a Preset Endpoint technique utilizing 1.0 M HCl as the titrant. A measured excess of HCl is added and the concentration of calcium carbonate is determined by a Preset Endpoint technique utilizing 1.0 M NaOH as the titrant. The Orion 960 Autochemistry System determines the endpoint and calculates the sample concentration.

Industry	Chemical
Species Measured	Ca(OH) ₂
Sample	Lime
Sample Size	1g
Typical Concentration	75-99%
Technique	# 8 Preset Endpoint
Electrode	Ross Sure Flow pH electrode 8172BN
Solutions	Sure flow combo. pH fill solution 810007, 1M HCl titrant. 1M NaOH titrant
Sample Prep	Weigh 1g of hydrated lime or 2g slurry lime & add 60ml DI H ₂ O. Insert electrode & stirrer & check to ensure good mixing. Between two titrations use flush/dispense feature to add a measured excess of 10ml of 1M HCl.

Statistics

# of Trials	3	Mean	94.00*	%CV	0.12
Analysis Time	2.3minute(s)				
Comments	* =Ca(OH) ₂				