

	FM-871	
	FERTILIZER METHODS	Chapter
		SECONDARY/MICRONUTRIENT ANALYSIS
		Subject
Dolomite/Limestone – Calcium Carbonate Equivalency (CCE)		

SCOPE: This is an analytical procedure for determining the percent Calcium Carbonate Equivalence (CCE) or percent neutralizing value in liming materials.

PRINCIPLE: The percent CCE value is determined by digesting the sample with a standardized acid (0.5N HCl) and then back titrating with a known standardized base (0.2N NaOH).

SAFETY: Each laboratory is responsible for maintaining a current file of the Occupational Safety and Health Administration (OSHA) regulations regarding the safe handling of the chemicals specified in this method. A reference file of Material Safety Data Sheets (MSDS) should be made available to all personnel involved in the chemical analysis. The preparation of a formal safety plan is also advisable.

APPARATUS & EQUIPMENT:

- Buret 25 mL (Class “A” glassware)
- Beakers 250 mL
- Volumetric flask 250 mL (Class “A” glassware)
- Graduated cylinder 50 mL (Class “A” glassware)
- Watch glass

REAGENTS & CHEMICALS:

- Deionized (D.I.) water q.s.
- Hydrochloric acid (HCl) certified American Chemical Society (A.C.S.) grade or equivalent – **Caution: Strong acid. Avoid breathing vapors and skin contact. Use in a fume hood and wear protective equipment.**
- Sodium Hydroxide (NaOH), NF/FCC grade or equivalent
- Phenolphthalein certified A.C.S. grade or equivalent
- Ethyl Alcohol (Denatured)
- 0.5N HCl (standardized)
- 0.2N NaOH (standardized)
- Phenolphthalein indicator: Dissolve 2.5 g of phenolphthalein in 250 mL of ethyl alcohol, mix well.

