Along with the increase in the use of ammonium salts in mixed fertilizers has come a wider recognition of the need for supplements of calcium and magnesium. This need has been discussed by Parker (5) and the necessity for a dependable method of analysis to determine the amount and form of calcium and magnesium supplements in fertilizers has been pointed out by the senior author (1). Recently a method was proposed by Pierre (6) for the determination of the potential acidity of a mixed fertilizer. The Association of Official Agricultural Chemists is now studying methods for the determination of "available magnesium".

The compatibility of ammoniates with limestone and dolomite and the differential activities of the two types of limestone toward the phosphatic components of standard superphosphate were reported in three contributions from the Tennessee Experiment Station (2, 3, 4). In one study admixtures of the two types of limestone were made under optimal conditions and kept for periods of time to be expected in home mixing and also in commercial practice, where the supplemented cured product is subject to evaluation by the official control chemist. In the other case, aqueous solution-suspensions of the mono-, or water-soluble, calcium phosphate and dolomite were used to determine the speed and extent of reactions and composition of the end-products. In both cases, periodic determinations of evolved CO$_2$ were utilized to record the speed and the extent of the reactions.

1Contribution from the Department of Chemistry, University of Tennessee Agricultural Experiment Station, Knoxville, Tenn. Received for publication February 6, 1934.
2Head of Department and Associate Soil Chemist, respectively.
3Figures in parenthesis refer to "Literature Cited," p. 661.