

### Research Note:

## MODIFICATION IN THE COLORIMETRIC ESTIMATION OF Mg.

While conducting the colorimetric estimation of Mg by Thiazole yellow as described by Young and Gill (1951) the authors found the following modifications helpful to avoid error, unnecessary repetition of samples, waste of chemicals and time for ashing.

The method, described by the above workers is not very reliable one for determining the Mg. in plant sample, as there is a less stability for developed colour with polyvinyl alcohol, other reagents and proceeding the methods with ash solution. The time factor and error could be minimized by the use of Spectronic-20 (direct reading) by substituting the 2 per cent starch solution in compensating solution and Titan yellow (Titangelb-G.R.) with Ternary acid wet-oxidation procedure. This method indicates the essentiality of hydroxylamine chloride solution with compensating reagents.

One ml. hydroxylamine, 5 ml. starch compensating solution and exactly 1 ml. of the Titan yellow solution and finally, after thorough mixing, 5 ml. of 2.5 N sodium hydroxide solution are added to the known amount of aliquot containing 25-50 micrograms of magnesium. The solution is allowed to stand for 15 mts. before reading the colour intensity at 525 m $\mu$ on Spectronic-20. And finally, the amount of Mg. is obtained from the standard curve and conc. of Mg. calculated, taking into consideration the amount of dry material presented by the aliquot used for colour development.

#### ACKNOWLEDGEMENT

The authors are deeply indebted to the Director, Shri K. V. Ahamed Bavappa, Central Research Institute of Plantation Crops, Vittal, for providing facilities and encouragement.

Central Research Institute of Plantation Crops,  
Vittal.

R.B.R. Yadava  
C. K. Mathai  
K. Vellachamy

#### REFERENCE

- Young, H. Y. and Gill, R. F. 1951. Determination of magnesium in plant with Thiazole yellow. Anal. Chem. 28:751-754.