



ABSTRACTS

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**SYNTHESIS OF 4-(2'-BENZOTHAZOLYLAZO)-3,5-DIMETHYLPYRAZOLE,
A REAGENT FOR SPECTROPHOTOMETRIC DETERMINATION OF
SILVER(I)**

Niti Poowanathai* and Apisit Songsasen

Department of Chemistry, Faculty of Science, Kasetsart University, Bangkok 10900, Thailand

In this work, the more simple method for synthesis of 4-(2'-Benzothiazolylazo)-3,5-dimethylpyrazole(BTADMP) was obtained by, diazotization of 2-Aminobenzothaizole in concentrated H_2SO_4 and then coupling with 3,5-Dimethylpyrazole. The crude product was purified by recrystallization with a mixture of ethanol and water to gave 4-(2'-Benzothiazolylazo)-3,5-dimethylpyrazole(61.27% yield) as orange crystal, melting point 232°C . The molecular structure of the product was characterized by spectroscopic method. 4-(2'-Benzothiazolylazo)-3,5-dimethylpyrazole formed a yellow 1:1 complex with silver(I) in a solution of 1:1 ethanol and dichloromethane. The complex exhibit absorption maxima at 420 nm. Conformity to Beer's law at 511 nm(molar absorptivity, $2.48 \times 10^3 \text{ M}^{-1}$) was obtained for up to 11.87 ppm of silver(I) with the correlation coefficient of 0.999. The detection limit is 0.174 ppm absolute and the coefficient of variation on the measure of silver(I) at 6.47 ppm is 1.32 %.