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## Fluorometric Determination of Secondary Amines with 2-Methoxy-2,4-diphenyl-3(2H)-furanone\*

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2-Methoxy-2,4-diphenyl-3(2H)-furanone (MDPF) was found to react with secondary amines to give nonfluorescent products (FII'). FII' was shown to be converted to fluorescent compounds (FI') which were produced by the reaction of primary amines with MDPF. On the basis of the examinations of the conditions for the formation of FII' and the conversion of FII' to FI' using sarcosine as the model of secondary amine, a spectrofluorometric method has been developed for the determination of secondary amines by using MDPF. Secondary amines were reacted with MDPF at pH 10 and 20 °C for 45 min and then incubated at pH 9 and 45°C for 10 min with taurine. By measurement of the bluish green fluorescence ( $\lambda_{ex}$  390 nm,  $\lambda_{em}$  480 nm), most secondary amines were determined at nanomole levels. The relative standard deviation ( $n=4$ ) of the method is 2.48% for the analyses of 25 nmol of sarcosine.

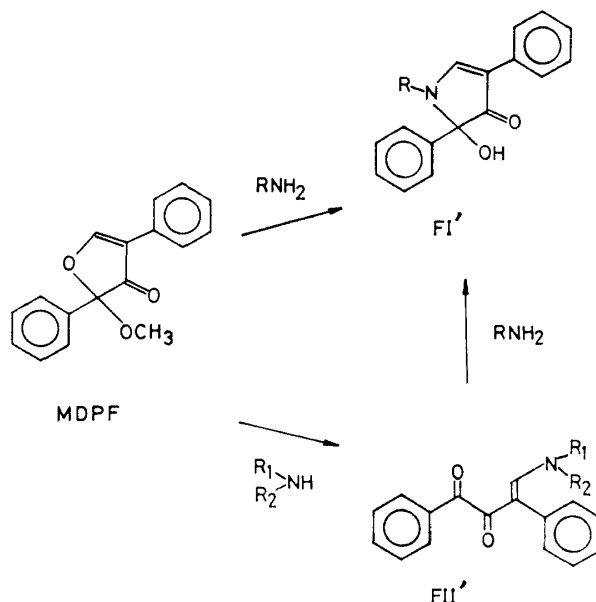


Chart 1.

\* 本報告は *Anal. Chem.*, 54, 2482-2485 (1982) に発表