

Title	Fluorometric determination of secondary amines with 2-methoxy-2, 4-diphenyl-3(2H)-furanone
Sub Title	
Author	中村, 洋(Nakamura, Hiroshi) 谷井, 悦子(Tanii, Etsuko) 田村, 善蔵(Tamura, Zenzo) 与田, 玲子(Yoda, Reiko) 山本, 有一(Yamamoto, Yuichi)
Publisher	共立薬科大学
Publication year	1983
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.28 (1983.) ,p.84- 84
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000028-0084

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

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

Hiroshi NAKAMURA, Etsuko TANI, ZENZO TAMURA,
Reiko YODA and Yuichi YAMAMOTO

中村 洋, 谷井悦子, 田村善蔵, 与田玲子, 山本有一

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 (λ_{ex} 390 nm, λ_{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.

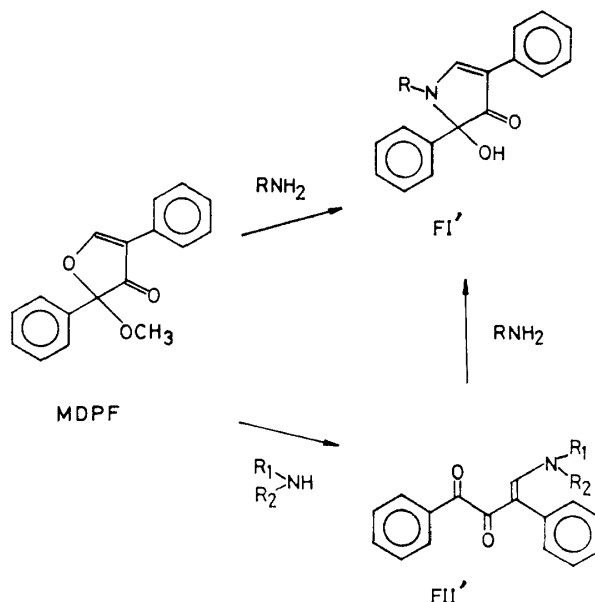


Chart 1.

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