

Title	Stepwise fluorometric determination of primary and secondary amines by liquid chromatography after derivatization with 2-methoxy-2, 4-diphenyl-3(2H)-furanone
Sub Title	
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Publisher	共立薬科大学
Publication year	1984
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.29 (1984.) ,p.47- 48
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000029-0047

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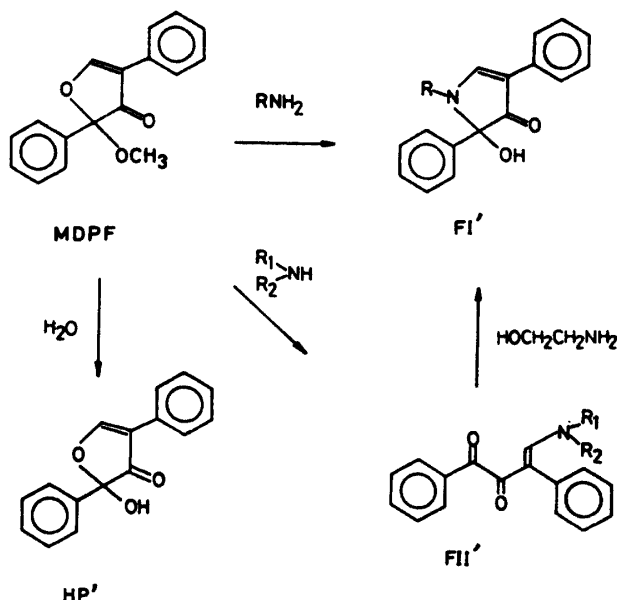
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**Stepwise Fluorometric Determination of Primary and Secondary Amines by Liquid Chromatography after Derivatization
With 2-Methoxy-2,4-diphenyl-3(2H)-furanone***

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A high-performance liquid chromatographic (HPLC) method was developed for the stepwise fluorometric determination of primary and secondary amines. Amines were reacted with 2-methoxy-2,4-diphenyl-3(2H)-furanone (MDPF) at pH 9.6 and 20°C for 30 min to produce fluorescent pyrrolinones (FI') from primary amines and nonfluorescent aminodienones (FII') from secondary amines. The MDPF-adducts of amines were separated on a reversed-phase C₁₈ (TSK LS-410 K) column with a mixture of methanol and 50 mM phosphate buffer (pH 7.0) (70 : 30). After the detection of FI' with the first fluorescence monitor (λ_{ex} 360 nm, λ_{em} >405 nm), the eluate was mixed with 12 M ethanolamine hydrochloride (pH 10.5) to convert FII' to fluorescent MDPF-ethanolamine which was detected with the second fluorescence monitor (λ_{ex} 390 nm, λ_{em} 480 nm).



* 本報告は *Anal. Chem.*, 56, 919 (1984) に発表

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No. 29 (1984)

The present method permits the determination of 3 pmol of lower *n*-alkylamines and 50 pmol of lower di-*n*-alkylamines. The relative standard deviations were 2.3–2.7% for 50 pmol of the *n*-alkylamines and 2.9–3.4% for 1 nmol of the di-*n*-alkylamines.