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Author	中村, 洋(Nakamura, Hiroshi) 高木, 和子(Takagi, Kazuko) 田村, 善蔵(Tamura, Zenzo) 与田, 玲子(Yoda, Reiko) 山本, 有一(Yamamoto, Yuichi)
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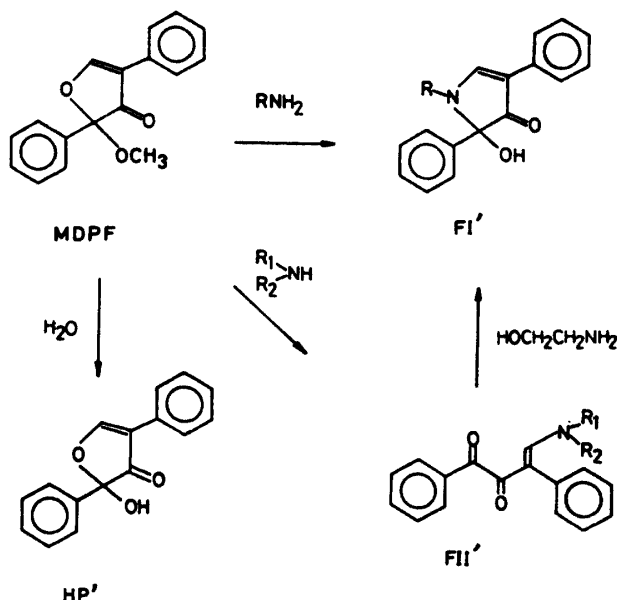
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**Stepwise Fluorometric Determination of Primary and Secondary Amines by Liquid Chromatography after Derivatization
With 2-Methoxy-2,4-diphenyl-3(2H)-furanone***

Hiroshi NAKAMURA**, Kazuko TAKAGI, Zenzo TAMURA***,
Reiko YODA and Yuichi YAMAMOTO

中村 洋**, 高木和子, 田村善蔵***,
与田玲子, (故)山本有一

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).



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** 東京大学薬学部

*** 慶応大学医学部

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.