

ジオール化合物の HPLC 分析用蛍光誘導体化試薬
3-[(1-{[4-(5,6-Dimethoxy-1-oxoisoindolin-
2-yl)-2-methoxyphenyl]sulfonyl}pyrrolidin-
2-yl)carbonylamino]phenylboronic Acid

寺戸 功、井上裕文、峠 良江、鶴田泰人

Anal. Sci., 16 (8), 36-41 (2000)

3-[(1-{[4-(5,6-Dimethoxy-1-oxoisoindolin-2-yl)-2-
methoxyphenyl]sulfonyl}pyrrolidin-2-yl)-
carbonylamino]phenylboronic Acid as a
Fluorescent Labeling Reagent for
Determination of Diol Compounds by HPLC

Isao Terado, Hirofumi Inoue,
Yoshie Tao and Yasuto Tsuruta

ABSTRACT: A fluorescent labelling reagent, 3-[(1-{[4-(5,6-Dimethoxy-1-oxoisoindolin-2-yl)-2-methoxyphenyl]sulfonyl}pyrrolidin-2-yl)carbonylamino]phenylboronic acid (DMPB), was designed for the determination of diol compounds by precolumn HPLC. DMPB reacted with diol compounds in the presence of a basic catalyst to produce the corresponding fluorescent derivatives, which were separated on a reversed-phase column by fluorescence measurement at 314 nm (excitation) and 388 nm (emission). The detection limits (S/N=3) were 31~50 fmol/injection.

抄録 ジオール化合物の定量のためのプレカラム HPLC 用蛍光誘導体化試薬として 3-[(1-{[4-(5,6-Dimethoxy-1-oxoisoindolin-2-yl)-2-methoxyphenyl]sulfonyl}pyrrolidin-2-yl)carbonylamino]phenylboronic Acid (DMPB) を開発した。DMPB は、塩基触媒の存在下、ジオール化合物と反応して強い蛍光を発する誘導体を生成し、誘導体は励起側 314 nm 及び蛍光側 388 nm における蛍光検出を用いた逆相系 HPLC により分離検出された。検出限界 (S/N=3) は 31~50 fmol/注入量であった。