高等学校化学学报 2007 , 28 (07): 1273—1275 ISSN: 0251-0790 CN: 22-1131/O6

研究简报

化合物疏水参数测定的脂质体毛细管电泳方法

董志强[1], 夏之宁[1,2], 蒋雪梅[2]

1. 重庆大学化学化工学院药学系,
2. 生物工程学院, 重庆 400030

收稿日期 2006-11-9 修回日期 网络版发布日期 2007-7-14 接受日期

摘要 采用脂质体模拟生物膜作为CE的运行介质, 探讨了一种可简单、快速获得t_l值的新技术, 即根据系列标准化合物在LCE中的迁移时间与其疏水参数的关系进行非线性拟合得到t_l值. 将该方法用于6种苯类化合物的疏水参数测定, 并对测定结果的准确性进行了比较.

关键词 脂质体 毛细管电泳 疏水参数 迭代拟合

分类号 0657

Method Measuring of Hydrophobic Parameter of Organic Compounds *via* a Novel Liposome Capillary Electrophoresis

DONG Zhi-Qiang[1], XIA Zhi-Ning[1,2]*, JIANG Xue-Mei[2]

1. Department of Pharmaceutics, Institute of Chemistry and Chemical Engineering,
2. College of Bioengineering, Chongqing University, Chongqing 400030, China

Abstract Liposome capillary electrophoresis(LCE) provides a novel and facile approach for determining hydrophobic parameters(lg*P*) of organic compounds. In order to avoid the error of the migration time of liposome phase(t_l) on determination, a novel technique was developed in this paper, in which the *t*l was obtained *via* non-linearity fitting with lg*P* values from literatures and migration time(t_m) of a series of standard compounds. lgP values of the six benzene derivatives determined by this LCE method were compared with literature values and the ones obtained by directly determined t_l and MEEKC. The average error between lg*P* values determined by two LCE methods was 0.07 logarithm units. The LCE method was simple and rapid, which can provide a new way to determine lg*P* of organic compounds.

Key words Liposome Capillary electrophoresis Hydrophobic parameter Iteration

DOI:

通讯作者 夏之宁 chem_lab_cqu@yahoo.com.cn