植物油中角鲨烯的GC/MS分析

廖杰　北京市海淀区复兴路28号 解放军总医院医学实验测试中心 100853
赵玉兰　北京市海淀区复兴路28号 解放军总医院医学实验测试中心 100853
李宁　北京工商大学 机械自动化学院 100037
等

摘　要：建立植物油中角鲨烯的GC/MS分析方法，植物油经KOH-甲醇法皂化和三氟化硼衍生，经HP-5MS毛细管柱分离，以二十四烷酸为内标，用GC/MS选择性离子监测对角鲨烯进行定量测定。方法在0.0625～2.00μg/mL范围内线性关系良好，相关系数r > 0.9998；最低检测限为7.8ng/mL。日内精密度为1.63%~2.89%，日间精密度为1.70%~3.22%。加标平均回收率为89.58%～94.12%。用所建立的方法测定6种植物油中角鲨烯含量。

关键词：气相色谱/质谱法(GC/MS),角鲨烯,植物油

Determination of squalene in vegetable oils by GC/MS

100853
100853
100037

Abstract：A method was developed for the determination of squalene in vegetable oils by gas chromatography-mass spectrometry(GC/MS) with selective ion monitoring. After saponification with potassium hydroxide and deveriation using borontriifluoride, vegetable oils were separated on a HP-5MS column. Lignoceric acid(CH3(CH2)22COOH) was selected as the internal standard. The The linear range of the method was 0.0625~2.00μg/mL (r=0.9998). The detection limit of squalene was 7.8ng/mL. The within- day RSD were 1.63%~2.89% The between-day RSD were 1.70%~3.22%, The average recovery of squalene was 90.60%. The method has been successfully applied in the determination of squalene in 6 vegetable oils.

Key words：Gas chromatography-mass spectrometry(GC/MS),Squalene,Vegetable oil