

研究报告

# 海洋微藻中C3羟基甾醇TMS衍生物EI源质谱规律研究

缪妙; 严小军; 徐继林; 侯云丹

宁波大学, 应用海洋生物技术教育部重点实验室, 浙江 宁波 315211

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**摘要** 通过推测甾醇TMS衍生物特殊碎片的质谱裂解规律, 结合标准品TMS衍生物的质谱图进行分析。根据质谱特征离子确定甾核的双键数, 甲基化程度和侧链上双键数, 烷基化程度以及相关的位置。用Bligh-Dyer法提取总脂, V(氯仿):V(正己烷)=1:4的混合溶液提取甾醇, BSTFA衍生化, 进行气相色谱-质谱分析。应用此研究规律对4种甲藻: 共生藻属甲藻 (*Symbodinium* sp.)、锥状斯克里普藻 (*Scrippsiella trochoidea*)、海洋原甲藻 (*Prorocentrum micans*)、无纹环沟藻 (*Gyrodinium instriatum*) 的甾醇组成进行鉴定。

关键词 [甾醇TMS衍生物](#) [EI质谱](#) [甲藻](#)

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## Study on the Regular Mass Spectrometry Pattern of the TMS Derivatives of Sterols from Microalgae

MIAO Mi ao; YAN Xi ao-jun; XU Ji -lin; HOU Yun-dan

Key Laboratory of Application Marine Biotechnology, Ningbo University, Ningbo 315211, China

**Abstract** The regular mass spectrometric pattern of the TMS derivatives of sterols was studied using mass spectrometry and some TMS derivatives standards. The number of double bonds, methylizes, alkylizes and their related position in the sterol nuclear and the side chains were confirmed by the characteristic ions. Total lipids were extracted using Bligh-Dyer method, sterols were isolated by solvent partition with V(chloroform):V(hexane) =1:4, derivated by BSTFA, and analyzed by GC/MS. The regular pattern was used for identifying the sterols in four dinoflagellates from the *Symbodinium* sp., *Scrippsiella trochoidea*, *Prorocentrum micans* and *Gyrodinium instriatum*.

**Key words** [TMS derivatives of sterols](#) [EI mass spectrometry](#) [dinoflagellates](#)

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通讯作者 严小军 [yanxiaojun@nbu.edu.cn](mailto:yanxiaojun@nbu.edu.cn)

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