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# 气相色谱/质谱法分析孔石莼中的脂肪酸

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# Analysis of fatty acid composition of Ulva pertusa Kjellm by ga spectrometry

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摘要 建立了孔石莼脂肪酸的气相色谱/质谱(GC/MS)测定方法。使用Folch法提取了孔石莼中的总脂,经过2 mol/L HCl-甲醇溶液的后,采用GC/MS法对其脂肪酸组成进行了分离分析,同时结合有机质谱学规律,分别对饱和脂肪酸甲酯、单不饱和脂肪酸甲酯和多不饱的裂解规律和质谱特征进行了分析归纳。通过质谱数据库检索和标准品对照,鉴定出孔石莼中的24种脂肪酸,其中9,12,15-十八碳三4,7,10,13-十六碳四烯酸和6,9,2,15-十八碳四烯酸3种主要多不饱和脂肪酸占总脂肪酸含量的45.14%。通过对孔石莼中脂肪酸的征离子在脂肪酸甲酯尤其是多不饱和脂肪酸甲酯的定性方面具有很好的应用价值。

关键词： 气相色谱/质谱法 脂肪酸 孔石莼

Abstract： A method of gas chromatography/mass spectrometry (GC/MS) was established to determine the fa of Ulva pertusa Kjellm. The total lipids of Ulva pertusa Kjellm were extracted using Folch method, derivatized w CH3OH solution, and analyzed by GC/MS. The fragmentation patterns and mass spectrometry characteristics o saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids were analyzed and conclu regular patterns of organic mass spectrometry. According to the database index and standard controls, twent acid components in Ulva pertusa Kjellm were identified, and the contents of 9,12,15-octadecatrienoic acid, 4,7 hexadecatetraenoic acid and 6,9,2,15-octadecatetraenoic acid accounted for 45.14% of the total fatty acids. T qualitative results of fatty acids in Ulva pertusa Kjellm show that it is very useful in identifying fatty acid methy characteristic ions, especially polyunsaturated fatty acid methyl esters.

Keywords： gas chromatography/mass spectrometry (GC-MS) fatty acids Ulva pertusa Kjellm

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