

气质联用测定苦苣菜属三种植物的挥发油成分^{*}

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摘要:目的 对苣荬菜、长裂苦苣菜、花叶滇苦菜中的挥发油成分进行分析与比较。方法 用水蒸气蒸馏法分别提取苣荬菜、长裂苦苣菜、花叶滇苦菜的挥发油, 采用气相色谱-质谱联用法, 鉴定其挥发油的化学成分。结果 苣荬菜鉴定出 35 种成分, 长裂苦苣菜鉴定出 55 种成分, 花叶滇苦菜鉴定出 49 种成分。结论 苣荬菜的主要成分为 6, 10, 14-三甲基-十五烷-2-酮(26.46%)、植醇(9.67%), 长裂苦苣菜的主要成分为正十六烷酸(8.01%)、4-(2, 6, 6-三甲基-1-环己烯-1-基)-3-丁烯-2-酮(7.09%), 花叶滇苦菜的主要成分为正十六烷酸(12.87%)、6, 10, 14-三甲基-十五烷-2-酮(12%)。三者共同的成分有 6, 10, 14-三甲基-十五烷-2-酮、1, 1, 5-三甲基-1, 2-二氢萘、(E)-1-(2, 6, 6-三甲基-1, 3-环己二烯-1-基)-2-丁烯-1-酮等 11 种。

关键词: 苣荬菜; 长裂苦苣菜; 花叶滇苦菜; 挥发油; 气相色谱-质谱联用

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Determination of Volatile Oil Components in Three Species of *Sonchus* by GC-MS

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Abstract Objective: To analyze and compare the volatile oil components in endive, *sonchus brachyotus* and *sonchus asper*. **Method:** volatile oils of endive, *sonchus brachyotus* and *sonchus asper* were extracted by steam distillation and their chemical constituents were identified by GC-MS. **Result:** 35 components were identified from endive, 55 components were identified from *sonchus brachyotus*, 49 components were identified from *sonchus asper*. **Conclusion:** The main components of endive are 6, 10, 14-trimethyl-pentadecan-2-ketone (26.46%) and phytol (9.67%). The main components of *sonchus brachyotus* are n-hexadecanoic acid (8.01%) and 4-(2, 6, 6-trimethyl-1-cyclohexene-1-yl)-3-butene-2-ketone (7.09%). The main components of *sonchus asper* are n-hexadecanoic acid (12.87%) and 6, 10, 14-trimethyl-pentadecan-2-ketone (12%). The common components of the three are 6, 10, 14-trimethyl-pentadecan-2-ketone, 1, 1, 5-trimethyl-1, 2-dihydronaphtha, (E)-1-(2, 6, 6-trimethyl-1-cyclohexene-1-yl)-2-butene-1-ketone and other 8 species.

Keywords endive, *sonchus brachyotus*, *sonchus asper*, volatile oil, GC-MS

苦苣菜属 (*Sonchus* L.) 植物属于菊科 (Compositae) 菊苣族 (Lactuceae), 为一年生、二年生或多

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