

UNDER PEER REVIEW

Chemical constituents analysis of petroleum ether extract from *Xylaria striata* by GC-MS

ABSTRACT

Aims: To analyze the chemical constituents of petroleum ether extract of *Xylaria striata*.

Methodology: The *Xylaria striata* was extracted by petroleum ether, and then the petroleum ether extract was analyzed by Gas Chromatography-Mass Spectrometer (GC-MS). *method?*

Results: Thirty-seven compounds were separated by gas chromatography. Based on the NIST spectral library and corresponding literature information, thirty compounds which covered 98.43% of the total peaks were identified. Most of them were fat acids and their esters (77.58%), steroids (19.44%). The methyl linoleate covered 38.23% of the total peaks, while methyl palmitate was 19.12%, methyl linoleate (9-cis, 12-trans) was 5.15%, methyl oleate was 4.43% and methyl stearate was 3.3%. *e*

Conclusion: This is the first report of chemical constituents of the petroleum ether extract of *Xylaria striata* by GC-MS. The result will provide much information for further exploration and utilization of *Xylaria striata*.

Keywords: *Xylaria striata*; Petroleum ether extract; GC-MS; Chemical constituents

1. INTRODUCTION

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The fungus *Xylaria striata* Pat. 1887 belongs to the family of *Xylaria* Hill ex Schrank. It is a kind of endophyte, mainly grows on decayed barks and lived roots of broad-leaved woodland in summer. To our knowledge, it has been used as folk medicine and nutrient-dense food in China for long years [1]. Previous studies reported that the *Xylaria species* exhibited multifarious bioactivities [2-5], and a series of these bioactive components had been isolated [6-9], which shows that fungus belongs to Xylaria species has high value of research and development. Our group has been doing systematic research on fungus *Xylaria striata* since 2013. We have completed and optimized the artificial cultivation methods of this fungus [10-12]. In addition, the preliminary screening of biological activity was also finished. We found *that* the ethanol extract of *Xylaria striata* showed significant antimicrobial and antitumor activity [13-14]. According to the reports in the existing literature, there is no systematic report about chemical constituents of this fungus, so the present investigation was carried out to determine the possible chemical constituents ~~from~~ *Xylaria striata* by GC-MS, which could be a basis for *ing* *e* *of*

XYLARIA STRIATA - To be typed in italics as typed in keywords.