

研究报告

豇豆与菜豆挥发物中美洲斑潜蝇引诱成分的分析与鉴定

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摘要

应用固相微萃取技术 (SPME) 和自行设计的挥发物收集装置以及GC-MS系统,对美洲斑潜蝇主要寄主植物豇豆与菜豆的挥发物进行收集和分析.鉴定出两种寄主植物的挥发物主要成分均为2-己烯醛、3-己烯醇、2-己烯醇、1-辛烯醇、3-己烯醇醋酸酯、 α -紫罗酮、 β -紫罗酮.通过与标准品的对照,测定了7种主要挥发性化合物之间的相对比例,并据此配制成人工引诱剂,进行了美洲斑潜蝇成虫的田间诱捕试验.结果证实所配制的引诱剂对成虫具有一定的引诱效果,其中 α -紫罗酮和 β -紫罗酮很可能在美洲斑潜蝇成虫寻找寄主植物的定向机制中起着重要作用.

关键词 [固相微萃取; 美洲斑潜蝇; 挥发性有机物; 田间诱捕试验](#)

分类号

Analysis and identification of *Liriomyza sativae* attractants from cowpea and kidney bean volatiles

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Abstract

In this paper, the volatiles from cowpea and kidney bean, the main host plants of American leafminer *Liriomyza sativae*, were collected and extracted by a self designed device and solid phase microextraction (SPME) technique, and analyzed by GC-MS. The results showed that the volatiles from the two beans had the same components mainly consisted of 2-hexenal, 3-Hexen-1-ol, 2-Hexen-1-ol, 1-Octen-3-ol, 3-Hexenol acetate, α -linalool and β -linalool. The lure made of the seven components was attractive to *L. sativae* in field trapping trials. Detailed analyses indicated that α -linalool and β -linalool might play important roles in the searching behavior of *L. sativae* for host plants.

Key words

[Solid phase microextraction](#) [Liriomyza sativae](#) [Volatile organic compounds](#) [Field trapping trials](#)

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