

快速鑒別食用油和篩查地溝油的新方法

New Method for Rapid Authentication of Edible Oils and Screening of Gutter Oils

僅數分鐘便可確定食用油樣品的真偽，從而篩查出地溝油

Authenticating edible oils and hence screening gutter oils within minutes to assure food safety

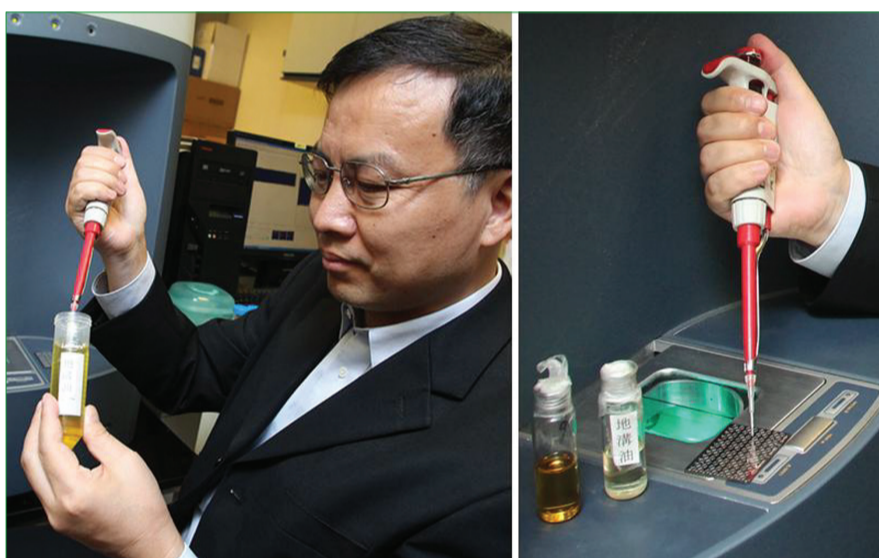
研究人員開發了一種簡單的方法，採用「基質輔助激光解吸電離質譜」技術，通過直接樣本載入、自動化數據採集和簡單數據處理等步驟直接分析食用油，並已建立常用食用油的初步譜圖數據庫。由於每一種類的食用油都有其獨特的譜圖，只要將食用油樣本的譜圖與數據庫中相應食用油的標準譜圖進行比較，便可在數分鐘內鑒別該食用油樣本是否與其標籤所載相符，進而可快速篩查地溝油。

特色與優點

- 建立簡單的分析步驟和食用油譜圖數據庫
- 食用油的鑑定時間由數小時縮短為數分鐘
- 直接分析食用油，而且可得到高質量和高重現性的譜圖

應用

- 鑒別食用油和篩查地溝油
- 建立食用油譜圖的數據庫



測驗示範
Testing of oils



姚博士在新聞發布會上講解有關研究成果
Dr Yao announced the research findings at a press conference

A new method has been developed to use matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS) for direct analysis of edible oils. This method involves direct sample loading, automated data acquisition and simple data processing, and has been applied to establish a preliminary spectral database of common edible oils. As different types of edible oils have different MALDI-MS spectral patterns, a sample of edible oil can be authenticated within minutes by comparing its spectrum with the spectra of the labeled oil in the database, and gutter oils thus can be screened out.

Special Features and Advantages

- Set up a simple analytical protocol and a spectral library of edible oils
- Shorten the oil identification duration from few hours to few minutes
- Simple method for direct analysis of edible oils, with high quality and highly reproducible results

Applications

- Authenticate edible oils and screen gutter oils
- Create comprehensive MALDI spectral library of edible oils

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