2D Pattern Recognition of White Spirit Based on the Electrochemical Profile Recorded by Screen-Printed Electrode

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doi: 10.20964/2020.06.27

Received: 30 January 2020 / Accepted: 3 March 2020 / Published: 10 May 2020

The rapid identification of liquor is valuable for both research and food safety purposes. However, rapid and accurate identification has been difficult because most of the current analysis methods are lab-based. In this work, we established an electroanalytical technique to detect the distribution of electrochemically active compounds in liquor. Because the chemical composition of different varieties is largely controlled by the fermentation process, this method has considerable potential for liquor identification. Six brands of nongxiang-flavor liquors were collected to confirm the feasibility of the proposed methodology. PCA and 2D pattern recognition were used for identification. The results indicate that the electrochemical profiles of the six brands can be distinguished using their voltammetric data.

Keywords: Electrochemical profile, White spirit; Electroactive compounds; Food authentication; Wuliangye

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