

Revealing honey falsification by means of determining the content of 5-hydroxymethylfurfural

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Abstract

This paper proposes a method for detecting honey falsification by determining the content of 5-hydroxymethylfurfural (5-HMF). Method includes synthesis of standard 5-HMF, sample preparation of honey samples, as well as subsequent chromatographic analysis by means of high performance liquid chromatography under the proposed conditions. The quality of synthesized standard was confirmed by gas chromatography-mass-spectrometry. Comparative characteristics of classical methods for determining 5-HMF in homey samples that was introduced in this article confirm high efficiency of HPLC analysis as a primary method for determining honey falsification.