


Original Article

Preparation of Honey Reference Material for Water Content by Karl Fisher and Refractometric Methods

I. F. Tahoun  and A. B. Shehata

National Institute of Standards, Tersa St, El-Matbah, Haram, P. O. Box: 136, Giza 12211, Egypt

 **I.F. Tahoun**
Email: Tahoun_nis@yahoo.com

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Abstract

Certified reference materials are essential tools for calibration of measuring instruments, validation of analytical methods and assuring quality of measurement results. However, in the case of water content in honey, which is used to determine the quality and the marketability of honey, there is a lack of matrix reference materials. Certified reference material for water content in honey has been developed by the National Institute of Standards, Egypt. This article describes production of the material from processing to value assignment. Characterization of the material was carried out by refractometric and Karl Fisher titration procedures, where homogeneity and stability studies were carried out by Karl Fisher titration method. The measurement results were statistically analysed and weighted mean was calculated as assigned value. The certified value and expanded uncertainty were found 16.24 ± 0.33 g/100 g, respectively.

Keywords

Water content; Honey; Karl Fisher; Refractometer; Reference material