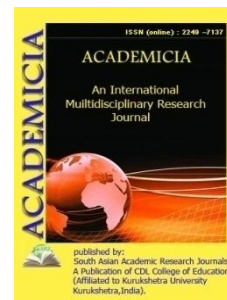


ACADEMICIA
An International
Multidisciplinary
Research Journal
(Double Blind Refereed & Peer Reviewed Journal)



DOI: 10.5958/2249-7137.2021.02187.X

DETERMINATION OF ADULTERANTS IN HONEY

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ABSTRACT

In this article, an analysis is done based on different studies conducted across the globe on the topic of the use of adulterants in honey. The adulterant of choice for my sample is sugar cane and corn syrup, which is one of the most common adulterants utilized in a variety of honey products. Honey adulteration is a complicated problem in the globe in general and in our nation in particular, according to most studies, and it has a significant economic effect. It may be caused by the introduction of different inexpensive foreign elements. Contamination of honey alters the physiochemical besides rheology of honey, decreasing its nutritional and medicinal properties. As a consequence, methods of adulterate identification and accurate measurement of adulterants would have been utilized to create high grade honey devoid of any foreign addition. Numerous approaches used for honey adulteration detection by maximum researchers, such as, Liquid Chromatography (LC) and Gas Chromatography (GC) analysis, protein characterization, Near Infra-Red (NIR) spectroscopy, Fourier Transform Infrared (FTIR) spectroscopy with Attenuated Total Reflectance (ATR), High Performance Anion Exchange Chromatography with Pulsed Aerometric Detection (HPAEC-PAD), High Performance Liquid Chromatography Coupled to Isotope Ratio Mass Spectrometry (HPLCIRMS), calorimetric methods, Stable Carbon Isotope Ratio Analysis (SCIRA), Fourier Transform (FT), Raman spectroscopy and microscopic detection techniques are appropriate as well as deliver valuable knowledge. However, to get a complete besides dependable result, individuals must not concentrate only on each method, but rather utilize a mix of them.

KEYWORDS: Adulteration, Analysis, Food, Honey, Methods, Sugar, Syrup.

REFERENCES

1. O. Abbas *et al.*, “Analytical methods used for the authentication of food of animal origin,” *Food Chemistry*. 2018, doi: 10.1016/j.foodchem.2017.11.007.
2. C. Beltramo *et al.*, “Validation of a DNA biochip for species identification in food forensic science,” *Food Control*, 2017, doi: 10.1016/j.foodcont.2017.03.006.
3. E. Hong *et al.*, “Modern analytical methods for the detection of food fraud and adulteration by food category,” *Journal of the Science of Food and Agriculture*. 2017, doi: 10.1002/jsfa.8364.
4. J. Sherma and F. Rabel, “A review of thin layer chromatography methods for determination of authenticity of foods and dietary supplements,” *J. Liq. Chromatogr. Relat. Technol.*, 2018, doi: 10.1080/10826076.2018.1505637.
5. T. Cajka, M. R. Showalter, K. Riddellova, and O. Fiehn, “Advances in mass spectrometry for food authenticity testing: An omics perspective,” in *Advances in Food Authenticity Testing*, 2016.
6. C. Fanali, L. Dugo, and L. Mondello, “Advances in chromatographic techniques for food authenticity testing,” in *Advances in Food Authenticity Testing*, 2016.
7. A. C. A. Veloso, M. E. B. C. Sousa, L. Estevinho, L. G. Dias, and A. M. Peres, “Honey evaluation using electronic tongues: An overview,” *Chemosensors*. 2018, doi: 10.3390/chemosensors6030028.
8. F. Ulberth, “Advances in testing for adulteration in honey,” in *Advances in Food Authenticity Testing*, 2016.
9. S. Soares, J. S. Amaral, M. B. P. P. Oliveira, and I. Mafra, “A Comprehensive Review on the Main Honey Authentication Issues: Production and Origin,” *Compr. Rev. Food Sci. Food Saf.*, 2017, doi: 10.1111/1541-4337.12278.
10. A. P. Sobolev, S. Circi, and L. Mannina, “Advances in nuclear magnetic resonance spectroscopy for food authenticity testing,” in *Advances in Food Authenticity Testing*, 2016.