

Antimicrobial Effects of Honey on Bacillus Cereus

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Abstract

Background and Objective: Honey is a healthy and nutritious food that has been used for a long time as a treatment for different diseases. One of the applied properties of honey is its antimicrobial effect, which differs between different types of honey due to variation of phenolic and antioxidant compositions. This study aimed to assess antimicrobial effect of honey on Bacillus cereus, considering its chemical properties.

Material and Methods: Three samples of honey (A_1 and A_2 of Khorasan Razavi Province and A_3 of South Khorasan province) were prepared and studied in terms of chemical parameters. The antibacterial effect of honey was surveyed through Turbidimeter using spectrometer with incubator time of 2, 4, 6, and 8hrs. the level of turbidity caused by bacterium growth was measured at different times with a wavelength of 600nm.

Results: According to the study, the samples containing higher concentration of polyphenol has more antimicrobial activity. The samples of A_2 , A_3 , and A_1 had the highest concentration of polyphenol, respectively.

Conclusion: The results indicate the prebiotic effect of honey that can be justified by the presence of fructo-oligosacharids and vitamin B.

Keywords: Honey, Bacillus Cereus, Antibacterial, Turbidimetry.