

عنوان مقاله:

Antibacterial and Antioxidant Activity of Four Types of Honey with Different Floral Origion

محل انتشار:

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خلاصه مقاله:

Honey is a popular food product produced by honey bees that it is a well-known antimicrobial and antioxidant activity. Floral origin of honey plays an important role on its biological properties. This research was carried out to evaluate the antibacterial and antioxidant activity of four sample honey with different floral origin collected from the bee hive in the Golestan province in north of Iran. Evaluation of antibacterial activity against four pathogenic bacteria was performed by agar well diffusion method. Maple honey with diameter of inhibition zone as ۲۳.۳۳, ۲۲.۱۴.۳۳ and ۱۲.۳۳mm against *Shigella dysenteriae*, *Staphylococcus aureus*, *Bacillus cereus* and *Escherichia coli* respectively showed significant antibacterial effects. MIC and MBC of honey samples were determined by broth macrodilution tube method. The total phenol content (TPC) and the total flavonoid content (TFC) of honey samples was determined by Folin-Ciocalteu reagent and with aluminum chloride method respectively. Also to assess potential antioxidant activity of honey samples was used from reaction with ۱,۱ diphenyl-۲-picrylhydrazyl (DPPH) radical. MIC and MBC values of obtained for linden, maple and astragalus honeys were in the range of ۶.۲۵-۲۵% (V/V). The highest values of TPC, TFC and DPPH radical scavenging activity was related to linden, citrus and maple honeys respectively. In this study was demonstrated antibacterial and antioxidant activity of honey samples especially linden honey. Statistical analysis showed that the total phenolic content correlated with its antioxidant activity ($P < 0.001$). Overall, the results imply that biological activities of honey samples, according to the their floral origin are variable.

کلمات کلیدی:

Honey, Floral origin, antibacterial activity, Antioxidant Activity, MIC and MBC, TPC and TFC

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