



Physicochemical characteristics, total phenols and pigments of national and international honeys in Saudi Arabia (2012)
Arabian Journal of Chemistry (Article in press)

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Article No.: 4

فردى التخصص منشور (تحت الطبع) On line

Impact Factor: ٢,٦٨٤

Abstract

In 23 types of honey from Saudi Arabia and six other countries, the levels of some minor components and floral pigments as well as physicochemical characteristics were investigated. Most tested Saudi honeys, e.g. Acacia and Seder showed high values of density and total soluble solids and low water content compared to exotic ones. Some Acacia and Manuka samples had higher HMF contents than permitted levels. All the tested honeys were acidic; however Acacia honey had total acidity values over those of permitted levels, while most of the reminding types were comparable or acceptable. Also, Saudi Acacia and Egyptian honeys contained more content of total nitrogen, free amino acids and proline than those of the other tested types. Dark-colored honeys e.g. Acacia contained more phenolic content than those of the light-colored ones. Carotenoids were the predominant floral pigments in all the tested honeys, while xanthophylls and anthocyanins were the least predominant ones. Seder honeys showed moderate values of the tested characteristics compared to other types.

The tested parameters are useful to determine the botanical origin of Saudi or exotic honeys and their quality. Further research on specific physicochemical properties of Saudi Acacia honey especially acidity is very much recommended. New criteria based on the regional characteristics of Saudi honeys including antioxidants, micro-constituents are suggested