

DETERMINATION OF FLAVONOIDS IN SUDANESE HONEY SAMPLES AND PLANT SOURCES COLLECTED FROM DIFFERENT PLACES IN SUDAN

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This investigation was carried out, for the determination of plant source and flavonoids in some honey samples collected from different localities of Sudan depending on pollen grains mixed with honey. Honey samples were prepared by worm water, acetolysis method, stained with basic fuchsin and suspended in glycerin for microscopic examination. Pollen grains were compared with those of similar pollen with other references. The predominant plant species in the honey samples from Damazeen was *Azadirachta indica*, Gabl Abu-Garin *Hyphaena* tobacco, Sinnar Wad Hashim, Alfaw and Tallha forests: *Helianthus annuus*. In Eldewaim: *Ziziphus spinachristi*. In Gaddarif: *Acacia seyal var seyal* and in Khartoum: *Medicago sativa* were the source of pollen in the honey samples. For the determination of flavonoids concentration, HPLC was used. Some standards like Hesperetin, Quercetin, Kaempferol, Apigenin and Isorhamnetin were used. In a honey sample of Gable Abugarin, two types of flavonoids were detected: Quercetin 6.8 mg/100 g and Kaempferol 1.5 mg/100 g. In the honey sample of Tallha area, the Hesperetin 1.97 mg/100 g was detected. Gaddarif area: Isorhamnetin 1.217 mg/100 g was detected and Khartoum: Isorhamnetin 0.904 mg/100 g was detected. In honey samples of Sinnar Wad Hashim, Eldewaim, AL-faw areas, some peaks of flavonoids were encountered in small concentration but not detected because of the apparent shortness of their detectors. In a honey sample of Eldamazeen, flavonoids were not detected.

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