عنوان مقاله:

Determination of Flavonoid Compounds in Medicinal Plants and Fruits with Antidiyabetic Properties by HPLC

محل انتشار:

هفتمین همایش بین المللی مطالعات میان رشته ای در صنایع غذایی و علوم تغذیه ایران (سال: 1402)

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خلاصه مقاله:

Our aim in this study is to analyze the flavonoids catechin,kaempferol, luteolin,quersetin and apigeninof Salvia fruticosa MILLER. , Punica granatum L. ,Juglans regia L., Matricaria chamomilla L., andinvestigating the antidiabetic effect caused by the presence of flavonoids in these plants. In this study,leaves of Juglans regia L., leaves and above ground parts of Salvia fruticosa MILLER., flowers ofMatricaria chamomilla L., and peel of Punica granatum L.were collected for analysis. The samplesfirst dried and their ethanol extract was prepared in the form of a very fine powder with ۲۵ ml of ۸۰%ethanol and ۵ grams of dried samples.The analysis of the device was done with HPLC method andOptimal parameters for HPLC were determined before quantitative analysis. Injection volume : ۲۰microliter , Column temperature : ۳۵ ℃ , The flow rate: ۱ ml/min(۰.۰۱×۱۰-۶m۳/s), Mobil faz A: %۰.۱ Formic acid Mobil faz B: MeOH: ACN: Formic acid : ۹: ۱: ۰.۱.The analysis results showedthat there is catechin in All samples but its amount is significantly higher in peel of Punica granatumL. extract .The highest and lowest quercetin concentrations were found respectively Salvia fruticosaMILLER., ۳.۰۴۶۱g/l and peel of Punica granatum L. ۰.۷۰۲۹ g/l,.The highest apigenin concentrationswas found in flower of Matricaria chamomilla (۳.۵۵۹۹g/l).Luteolin and kaempferol were found inleaves of Juglans regia L., respectively ۱.۰۷۳ g/l and ۱.۶۲۶۵ g/L, and were not found in the rest of thesamples. In the selected samples the highest total quercetin, apigenin , catechin ,kaempferol andLuteolin concentrations were ۱۲/۸۵۸۰ g/l in Salvia fruticosa MILLER and lowest concentrations werefound ۸.۳۲۳۰ g/l in Matricaria chamomilla L. According to the proven effects of flavonoids in thetreatment of diabetes, it can be concluded that in these ۴ samples, especially Salvia fruticosaMILLER., there are antidiabetic effects caused by these flavonoids and they can be used as diabetesmellitus and Hyperglycemia treatment in the long time.

کلمات کلیدی:

Flavonoid, HPLC, Diabetes mellitus, Hyperglycemia