QUALITATIVE AND QUANTITATIVE DETERMINATION OF KAEMPFEROL

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Flavonoids are large group of compounds, which present in natural products, and have been considered as active ingredients of many medicinal plants. Generally, they have the structure of a 15-carbon skeleton, consisting of two phenyl rings and a heterocyclic ring. Flavonoids have a variety of biological activities, antioxidative, radical scavenging, anti-inflammatory, anti-depressant, etc. Moreover they have cancer preventive effects [1].

In this study, qualitative and quantitative determination of kaempferol was done using high performance liquid chromatography-electrospray ionisation mass spectrometry in positive mode. Different extraction methods, and standard additions method were carried out to plant samples. The recoveries of kaempferol from the studied samples fortified with this compound were also used to test of the accuracy. In the extraction step, various extraction reagents and/or their mixture, such as methanol, methanol/water, methanol/ascorbic acid were used. After applying the optimum HPLC-MS conditions to plant extracts, the highest kaempferol concentration was found in nettle plant, the lowest kaempferol concentration was found in purslane plant.

References