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High performance liquid chromatography fingerprinting technology for herbal drugs

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A chromatographic fingerprint of a herbal drug is a chromatographic pattern of pharmacologically active and chemically characteristic constituents present in the extract. But the quality control and quality assurance still remains a challenge because of the high variability of chemical components involved and creates problem in establishing quality. Based on the concept of phytoequivalence, the high performance liquid chromatography (HPLC) fingerprints of herbal medicines could be utilized. With the help of the spectral information the hyphenated instruments show greatly improved performances in terms of the elimination of instrumental interferences, retention time shift correction, selectivity, chromatographic separation abilities and measurement precision. In order to obtain better separation, new techniques have been recently developed in research field of liquid chromatography such as reversed-phase ion-pairing HPLC (RP-IPC-HPLC), strong anion exchange HPLC (SAX-HPLC). Due to complexity of the chromatographic fingerprint and the irreproducibility of chromatographic instruments and experimental conditions, several chemometric approaches such as variance analysis, peak alignment, correlation analysis, and pattern recognition are employed to deal with the chromatographic fingerprint.

Biography

Shilpa Rohilla has completed her B.Pharm from Pt. B. D. Sharma,UHS,Rohtak and doing her M. Pharm specialisation in Pharmaceutical Chemisry from Birla Institute of Technology And Sciences.

Screening of secondary metabolites of golden eye grass for antioxidant activity

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Curculigo orchioides is a medicinally important tuberous herb having various pharmacological activities. During the present scenario researchers are more interested towards free radical research and herbal antioxidants have more demand in the market. Various investigation have been carried out by the researchers on the aspect of different pharmacological activities of this plant. The free radical scavenging activity of methanolic leaf and tuber extract is studied along with quantitative analysis of various phytochemicals. Tuber extract is having lower polyphenol content in comparision to leaf extract. Flavonoid content is higher for tuber extract than that of leaf extract. Free radical scavenging activity of the extract is studied by DPPH assay. Tuber extract is having lower IC_{50} value compared to leaf extract.