

CHROMATOGRAPHY A COMPETENT TOOL FOR PHYTOCHEMICAL PROFILING OF MEDICINAL PLANTS – A REVIEW

SONIA, N. S.¹ & JESSYKUTTY, P. C.²

¹Department of Plantation Crops and Spices, College of Agriculture, Vellayani,
Kerala Agricultural University, Thrissur, Kerala, India

²Associate Professor, Department of Plantation Crops and Spices, College of Agriculture Vellayani
Kerala Agricultural University, Thrissur, Kerala, India

ABSTRACT

Chromatography is a physical method of separation of components in a mixture by distributing it between a stationary phase using a mobile phase. Based on geometry of technique there are planar chromatography and column chromatography. In planar chromatography the stationary phase is present as a plane or on a plane and in column chromatography it is embedded with in a tube. Planar chromatography includes paper chromatography, Thin Layer Chromatography (TLC) and High Performance Thin Layer Chromatography (HPTLC). Column chromatography includes Liquid Chromatography (LC), Gas Chromatography (GC) and Supercritical Fluid Chromatography (SFC). High Performance Liquid Chromatography (HPLC) is a faster separation system with different modes of elution, mode of functioning as well as separation techniques suited for heat sensitive compounds whereas GC can separate components present in volatile oils only. SFC uses a supercritical fluid usually carbon dioxide for the separation of components which are difficult to be handled by both LC and GC. Chromatographic systems are hyphenated with sophisticated detectors like mass spectrometers (MS) or tandem mass spectrometers (MS – MS) for precise identification as well as quantification of molecules.

KEYWORDS: Stationary, Mobile, Planar, Column, Mass Spectrometry

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