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Identification of biomarker(s) from polyherbal formulation used in hyperlipidemia for qualitative and quantitative analysis

Charmy S Kothari, Maulik Ranpariya and **Priti Mehta**
Nirma University, India

Herbal medicines have a long therapeutics history and are still serving the need. However, the quality control of herbal medicines still remain a challenge because of the complex nature of the phytoconstituents. The aim and objective of the study is identification of biomarker for qualitative and quantitative analysis of polyherbal formulation containing Arjuna, Guggul & Pushkarmoola in combined dosage form. The poly herbal formulation was evaluated for physical parameters, organoleptic parameters and physicochemical parameters as per AYUSH and WHO guidelines. Quantification of constituent was done by developing and validating High Performance Thin Layer Chromatography (HPTLC). The HPTLC method was developed and validated for poly herbal formulation in the methanol extract. HPTLC separation was achieved on precoated silica gel 60F-254 using Toluene : Ethyl Acetate (8:2 v/v) as mobile phase. Polyherbal formulation methanolic extract gave the peak of E and Z guggulsterones at Rf value 0.34 and 0.41, respectively which was further confirmed with reference standard. Assay % of E and Z guggulsterones was found to be 81% and 83%, respectively. Spots of E and Z guggulsterones from polyherbal formulation was isolated for identification. Identification was confirmed by mass spectrometry. Hence, E and Z guggulsterones can be used as a biomarker controlling quality of polyherbal formulation containing Arjuna, Guggul & Pushkarmoola in combined dosage form.

Biography

Charmy S Kothari has 11 years of teaching and research experience. She published 18 research papers and received 3 research presentation awards. Additionally, she is the recipient of Dr. P D Sethi's Research Paper Certificate of Merit Award 2007. She received a financial assistance from GUJCOST worth Rs. 40,000 to organize workshop on Process Spectroscopy & Chromatography. She received a Minor Research Grants from Nirma University worth Rs. 90,000 and GUJCOST worth Rs. 5,00,000. Her areas of research interest are analytical and bioanalytical method development by QBD approach, validation and stability studies, impurity profiling and isolation, identification and characterization of marker compounds from plants and formulations.

charmy.kothari@nirmauni.ac.in

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