

Gopal Narayan Singh University
Faculty of Pharmacy

Extraction, Isolation, and Purification of Herbal Drugs

Course code: BPHVA1

Objective: Extraction plays an important role in separation and characterization of different natural products. Practically most of them have to be purified by the combination of several chromatographic as well as non-chromatographic techniques and various other purification methods to isolate natural products.

Unit I

6 hours

Introduction of phytomedicine and natural products. Role of natural chemistry in modern Pharmacy. Definition and significance of extraction in pharmacognosy. Study of solvents in used for extraction. Mechanism of action of extraction. Advantage and disadvantage of solvents used for extraction. Study of general terminology of marc, menstruum

Unit II

6 hours

Objective and types of extraction. Different methods of extraction. (Cold and hot extractions methods). The conventional extractions techniques. Modern methods of extractions process. Principle and construction of microwave, ultrasonication, supercritical extraction, pressurized liquid extraction.

Unit III

6 hours

Pulsed electric field extraction method and principle. Extraction process of thermolabile or volatile constituents. Factors affecting of solvent extraction. Difference between isolation and extraction. Percolation process for concentrated preparations. Discuss significance of gradient and isocratic eluent techniques for isolated novel phytoconstituents.

Unit IV

6 hours

Introduction of column chromatography and flash column chromatography. Role of column chromatography in isolation. Mobile phase solvents used for secondary metabolite detection in TLC.

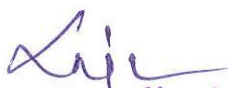
Unit V

6 hours

Phytochemical fingerprinting with using HPTLC and LC-MS. Application in the characterization of herbal extracts.



PRINCIPAL
NARAYAN INSTITUTE OF PHARMACY
JAMUHAR, SASARAM, ROHTAS (BIHAR)



Coordinator
IQAC (NAAC)
Gopal Narayan Singh University
Jamuhar, Sasaram, Rohtas (Bihar)

