Certificate Course Details

Programme title:

Extraction and Preliminary Phytochemical Screening Methods of Plant Extracts

Year of Introduction: 2017

Course Code: VACCG01

About the certificate course:

Pharmacognosy is the science of bioactive natural substances found in plants, animals, microbes and minerals. Researchers in this field investigate natural compounds, new therapeutic agents and also medicinal plants that include the subjects of botany, chemistry, and pharmacology.

This certificate course highlights the applications of different extraction techniques useful for the preparation of medicinal plant extracts. It also includes the applications of preliminary phytochemical studies performed for testing the presence of different plant secondary metabolites in plant extracts by standard qualitative procedures. Hence this course of qualitative analysis was useful for researchers for further analysis of plant extracts like TLC, HPTLC and Column Chromatography.

Contents of the Programme:

1. Introduction to preliminary phytochemical screening (qualitative analysis)
2. Detection of alkaloids
3. Detection of carbohydrates
4. Detection of glycosides
5. Detection of phytosterols
6. Detection of saponins
7. Detection of tannins and phenolic compounds
8. Detection of proteins and amino acids
9. Detection of flavonoides
10. Detection of terpenoids
11. Detection of cardiac glycosides
12. Extraction techniques of medicinal plants
13. Maceration, infusion, digestion
14. Decoction, percolation
15. Hot continuous extraction (soxhlet)
16. Aqueous alcoholic extraction by fermentation,
17. Counter-current extraction
18. Supercritical fluid extraction
19. Ultrasound extraction (sonication)
20. Phytonics process

Programme Outcome (P.O.):

P.O. (1): Student(s) who will completed the prescribed hours of certificate course were able understand the application of different extraction techniques and selection of appropriate method based on plant powder morphological characters.

P.O. (2): Applications of different qualitative chemical tests for identification of plant secondary metabolites.

PROGRAMME SCHEDULE

Day I	**Date: 1st Oct., 2017**
Time: 10.00 AM	
10.00 AM – 10. 15 AM	Registration
10.15 AM – 10.25 AM	Welcome Address
10.25 AM – 10.40 AM	Inauguration of Training Programme
10.40 AM – 10.50 AM	Introduction of the Participants
10.50 AM – 11.50 AM	**Session – 1: Mrs. S. Sarala** Introduction to medicinal plants & its importance
11.50 AM – 12.00 PM	Tea Break
12.00 PM – 1.00 PM	**Session – 2: Dr. M. Ramaiah** Introduction to medicinal plants & its importance
1.00 PM – 2.00 PM	Lunch
2.00 PM – 4.00 PM	**Session – 3: Mrs. S. Sarala** Extraction techniques of plants
4.00 PM – 4.30 PM	Interactive Session
4.30 PM – 5.00 PM	Tea & Snacks
Day II	**Date: 8th Oct., 2017**
10.00 AM – 11.00 AM	**Session – 4: Mrs. S. Sarala** Live demonstration of extraction techniques
11.00 AM – 11.10 AM	Tea Break
11.10 AM – 12.30 PM	**Session – 5: Dr. M. Ramaiah** Live demonstration of extraction techniques
12.30 PM – 1.00 PM	Interactive Session
1.00 PM – 2.00 PM	Lunch
2.00 PM – 4.00 PM	Experiment on “Extraction of Vasaka” by Soxhlation technique
4.00 PM – 4.30 PM	Result analysis
4.30 PM - 5.00 PM	Tea & Snacks

Day III	**Date: 15th Oct., 2017**
10.00 AM – 11.00 AM	**Session – 6: Mrs. S. Sarala** Introduction to Preliminary phytochemical screening methods of plant extracts
11.00 AM – 11.10 AM	Tea Break
11.10 AM – 12.00 PM	**Session – 7: Dr. M. Ramaiah** Qualitative analysis of Alkaloids, Glycosides
12.00 PM – 1.00 PM	Interactive Session
1.00 PM – 2.00 PM	Lunch
2.00 PM – 4.00 PM	**Session – 8: Mrs. S. Sarala** Qualitative analysis of Steroids, Flavonoids, Resins & Tannins
4.00 PM – 4.30 PM	Interactive Session
4.30 PM - 5.00 PM	Tea & Snacks
Day IV	**Date: 22nd Oct., 2017**
10.00 AM – 12.00 PM	**Session – 9: Mrs. S. Sarala** Qualitative analysis of Carbohydrates, proteins, lignanes etc
12.00 PM – 12.10 PM	Tea Break
12.10 PM – 12.30 PM	Interactive Session
12.30 PM – 1.00 PM	Quiz programme on Qualitative analysis of Phytopharmaceuticals
1.00 PM – 2.00 PM	Lunch
2.00 PM – 4.00 PM	**Session – 10: Dr. M. Ramaiah** Live demonstration of phytochemical screening methods
4.00 PM – 4.30 PM	Interactive Session
4.30 PM - 5.00 PM	Tea & Snacks
Day V	**Date: 29th Oct., 2017**
10.00 AM – 12.00 PM	**Session – 11: Mrs. S. Sarala** Live demonstration of phytochemical screening methods
12.00 PM – 12.10 PM	Tea Break
12.10 PM – 1.00 PM	Preliminary phytochemical analysis of ethanolic extract of senna & Result analysis
1.00 PM – 2.00 PM	Lunch
2.00 PM – 2.10 PM	Feedback
2.10 PM – 2.55 PM	Evaluation of the participants through question paper
2.55 PM – 3.00 PM	Vote of thanks.
3.00 PM – 4.00 PM	Certificate Distribution
4.00 PM – 4.30 PM	Photo Session
4.30 PM – 5.00 PM	Tea & Snacks

Person In-charge:

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