

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B. Pharm. Semester - 3

Subject Code 230006  
Subject Name Pharmacognosy – II

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Sr.No	Course content
1.	<b>Resins</b> : Study of drugs containing resins and resins combination like Podophyllum, Jalap, Capsicum, Myrrh, Asafetida, Benzoin, Turmeric, Ginger.
2.	<b>Tannins</b> : Study of tannins containing drugs like Gambir, Black catechu
3.	<b>Volatile Oils</b> : General methods of obtaining volatile oils from plants, Study of crude drugs and volatile oils of <u>Mentha</u> , <u>Coriander</u> , <u>Cinnamon</u> , <u>Cassia</u> , Lemon peel, Lemon grass, Caraway, Dill, <u>Clove</u> , <u>Fennel</u> , Nutmeg, <u>Eucalyptus</u> , <u>Chenopodium</u> , <u>Cardamom</u> , Valerian, Sandal wood.
4.	<b>Phytochemical Screening</b> : 4.1 Preparation of extracts 4.2 Screening of alkaloids, saponins, cardenolides and bufadienolides, flavonoids and leucoanthocyanidins, tannins and polyphenols, anthraquinones, cynogenetic glycosides, amino acids in plant extracts
5.	<b>Fibres</b> : Study of fibers used in pharmacy such as cotton, silk, wool, nylon.
6.	<b>Pharmaceutical aids</b> : Study of pharmaceutical aids like talc, diatomite, gelatin and natural colors.

### **Pharmacognosy – II- Practical (230006P)**

1. Identification of crude drugs mentioned in theory (morphology and chemical tests.)
2. Study of fibers and pharmaceutical aids.
3. Microscopic studies of seven underlined crude drugs and their powders mentioned under the category of volatile oils in theory and their chemicals tests.
4. General chemical tests for alkaloids, glycosides, steroids, flavonoids and tannins.

### **Reference Books:**

1. Trease and Evans Pharmacognosy. Fifteenth Edition, William Charles Evans, W. B. Saunders, Edinburg London New York Philadelphia St. Louis Sydney Toronto 2002.
2. Pharmacognosy: V. E. Tyler, L. R. Brady, J. E. Habbers, Lea and Febiger Philadelphia, 9<sup>th</sup> Edition, 1988.

3. Pharmacognosy And Pharmacobiotechnology. James E. Robbers, Marilyn K. Speedie, Varro E. Tyler, Williams & Wilkins, 1996; A Wavery Company, USA.
4. A Text book of Pharmacognosy: C. S. Shah, J. S. Quadry, B. S. Shah Prakashan, Ahmedabad. 13<sup>th</sup> Edition, 2007-08.
5. Textbook of Pharmacognosy: T. E. Wallis, CBS Publishers and Distributors, New Delhi, 5<sup>th</sup> Edition, reprinted, 2003.
6. A Textbook of Pharmacognosy. Fifth Edition, T. C. Denston, Pitman Medical Publishing Co. Ltd., London.
7. Recent Progress in Medicinal Plants, Volume 4, Biotechnology and Genetic Engineering. J. N. Govil, P. Ananda Kumar, V. K. Singh, Studium Press, LIC, Texas-77072, USA.
8. Modern Pharmacognosy. Egil Ramstad, McGraw-Hill Book Company, London, New York, Toronto.
9. Textbook of Pharmacognosy. Sixth Edition, 1948, Heber W. Youngken, The Blakiston Company, Toronto.
10. The Organic Constituents of Higher Plants. Their chemistry and interrelationships. Trevor Robinson, Burges Publishing Company, Minneapolis, USA, 1963.
11. Pharmacognosy: Phytochemistry Medicinal Plants. Jean Bruneton, 2nd Edition; 1999. Intercept Ltd., Londers, Editions TEC & DOC Paris.
12. Laboratory Handbook for the fractionation of Nattutal extracts by Peter Houghton and Amala Raman, Chapman & Hall Madras, 1998.