

SHREE H.N. SHUKLA GROUP OF COLLEGES

(AFFILIATED TO SAURASHTRA UNIVERSITY & GTU)



2-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2440478, 2472590

3-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2471645

Behind marketing yard,
Near Lalpari lake,
Between Amargadh-
Bhichri, Rajkot-360002.
Ph.No.-90990 63150

M. Sc. SEMESTER-III

ORGANIC PHARMACEUTICAL CHEMISTRY

C(OP)-301: ADVANCE CHROMATOGRAPHIC TECHNIQUES

1. **Introduction**, revision of various chromatographic techniques and terminologies.
2. **Principle, theory**, instrumentation and applications of GC, HPLC, UPLC and super critical fluid chromatographic techniques.
3. **Ion Chromatography**: Principle, theory, instrumentation and applications.
4. **Exclusion Chromatography**:

Theory and principle of size exclusion chromatography, experimental techniques for gel filtration chromatography (GFC) and gel-permeation chromatography(GPC). Column materials, factors governing column efficiency, methodology and applications.

SHREE H.N. SHUKLA GROUP OF COLLEGES

(AFFILIATED TO SAURASHTRA UNIVERSITY & GTU)



2-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2440478, 2472590

3-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2471645

Behind marketing yard,
Near Lalpari lake,
Between Amargadh-
Bhichri, Rajkot-360002.
Ph.No.-90990 63150

5. Hyphenated techniques: Principle, theory, instrumentation and applications of GCMS, LC-MS, GC-IR, LC-NMR, etc.

6. Planner chromatography:

Paper chromatography, thin layer chromatography, and high performance thin layer chromatography: Principle, theory, instrumentation and applications.

Reference Books

23. Chromatography by E. Heftman, 5th edition, part-A and B, Elsevier Science Publisher, 1992.
24. Instrumental Methods of Analysis by B. K. Sharma, Goel Publisher, Meerut.
25. Analytical chemistry by Gary D. Christian, 6th edition (1994) John Wiley and sons Inc. New York.
26. Fundamental of Analytical Chemistry 8th Edn. Saunders College Pub. 2001.
27. Analytical Chemistry by H. Kaur, PragatiPrakashan, Meerut.
28. Instrumental Methods of Chemical Analysis by Chatwal and Anand.
29. Standard Methods of Chemical Analysis by F. J. Welcher.

SHREE H.N. SHUKLA GROUP OF COLLEGES

(AFFILIATED TO SAURASHTRA UNIVERSITY & GTU)



2-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2440478, 2472590

3-vaishali nagar, Near
Amrapali railway
crossing,
Raiya road, Rajkot-
360001. Ph.No.-
(0281)2471645

Behind marketing yard,
Near Lalpari lake,
Between Amargadh-
Bhichri, Rajkot-360002.
Ph.No.-90990 63150

30. Introduction to Modern Liquid Chromatography: 2nd edition L. R. Snyder and J. J. Kirkland- John Wiley & Sons Inc.

31. Analytical Methods in Chemistry by Y. R. Sharma.

32. Analytical chemistry by Open learning second edi. (Vol. 1-30) Wiley India Edi.

33. B. L. Karger, L. R. Snyder and C. Howarth, An Introduction to Separation Science, 2nd edition (1973), John Wiley, New York.