

## Department of Pharmaceutics:

Pharmaceutics is the branch of pharmacy that deals with all facets of the process of converting a pharmaceutical drugs into a different dosage forms like tablets, capsules, oral liquids, ointments, injectables, aerosols, transdermal patches and cosmetics like face powders, cold creams, sunscreen lotions, tooth-pastes, nail-polish, lip-sticks, eye shadows, shampoos, hair dyes etc. that can be safely and effectively used in the clinical practice. It utilizes knowledge and technology involved in small and large scale production. It covers research & development of newer delivery systems and evaluation of various dosage forms.

## Department Staff

Sr.No.	Name	Qualification	Designation
1.	Dr. Patil Manojkumar S.	M. Pharm.Ph.D.	Principal
2.	Dr. Bathe Ritesh S.	M. Pharm.Ph.D.	Associate Professor & HOD
3.	Mr. KedarTukaram K.	M. Pharm.	Assistant Professor
4.	Mr. Jokare Shashikant P.	M. Pharm.	Assistant Professor
5.	Mr. More Swapnil M.	M. Pharm.	Assistant Professor

## Scope and Highlights:

- Development of novel drug delivery systems.
- Applications of nanotechnology in cancer therapy and targeted delivery systems.
  - Design of bioequivalence protocols.
  - Basic molecular biology study with special emphasis on cancer therapy.

- Development of cosmetics for modern era.
- Development of in-vitro – in-vivo correlation methods.

<b>Sr. No.</b>	<b>List of Major Equipment</b>	<b>Sr. No.</b>	<b>List of Major Equipment</b>
1	Tablet Compression Machine ( Karnavati) 10 station	18	Capsule Filling Machine
2	Dissolution Test Apparatus (8 Station)	19	Capsule Counter
3	Brookfield's Viscometer (Digital)	20	Electrophoresis Unit
4	Tablet Coating Machine	21	Ball Mill
5	Laminar Airflow ( Horizontal)	22	Precision Dial Type Hardness Tester
6	Liquid Filling Machine	23	Hardness Tester (Pfizer Type)
7	Tray Dryer	24	Energy Meter
8	Bottle Sealing Machine	25	Hardness Tester (Monsanto)
9	Bottle Washing Machine	26	Hot air oven
10	Disintegration Test App.	27	Incubator
11	Dissolution Test App.	28	Mechanical Stirrer
12	Ampoule Washing Machine	29	Electronic Balance
13	Ampoule Sealing Machine	30	Permeability Cups

14	Ointment Filling Machine	31	Suppository & Lipstick moulds
15	Crimping & Sealing Machine	32	Magnetic stirrer with Thermostat
16	Friability Test App.	33	Ampoule clarity test app
17	Ultra Sonicator	34	Aseptic cabinet

### **Department Achievements:**

- Mr. Bhushan Patil secured first rank in Solapur University in M. Pharm.examination.
- Students ofM. Pharm. had presented 09 Research papers in poster presentation session at 63<sup>rd</sup> IPC held at Bangalore.
  - Students had attended various state level and national level seminars.
- Student and staff had published 5 national and 4 international papers in academic year 2012-13.
- Student had successfully completed the research projects for the award of M. Pharm.degree.
  - Pharmaceutical Industries had very well cooperated in research projects considering their projects.
- The department has developed the facility to undertake the minor industrial research projects.

- Guest lectures by the eminent personalities from academic and industries were organized in the institute.
- Mr. Dheeraj Sarate got first prize in Avishkar competition in academic year 2012-2013 organised by Solapur University, Solapur.
  - Participated in various extracurricular activities.
- Miss. Choure Soniya V. and Miss. Pawar Seemarani M. got first prize in Avishkar competition in academic year 2013-2014 organised by Solapur University, Solapur.

### **Ongoing Research Activities:**

Research in the Pharmaceutics Department encompasses basic, applied, and clinical investigations in (i) Pharmacokinetics/ biopharmaceutics, (ii) Pharmaceutical analysis, (iii) Pharmaceutical biotechnology and drug delivery, (iv) Herbal medicine. Nanotechnology, targeted drug delivery, cosmetic drug delivery and novel drug delivery system. Colon targeted drug delivery system. Design and process optimization of floating drug delivery system.