



KN UNIVERSITY

Gota, Ahmedabad.



Workshop Report

Institute / Department	School/ Faculty of Pharmacy
Activity / Event Name	“Hands on Workshop on UV Visible Spectrophotometer”
Date of the event	18/04/2026
Duration	01:00 am- 5:00 pm
Location	Auditorium, 6 th floor, KN University, Ahmedabad & Central Instrumentation Lab, School/ Faculty of Pharmacy
Participant’s Branch/Institutes	B.Pharm Semester 4 and 2 Students
Total Number of Participants	80 Students from B.Pharm + 06 faculty members
Full Name of Speaker / Guest with designation	1. Dr. Nitish Sharma Assistant Professor NIPER, Ahmedabad 2. Prof. ManSingh Professor of Practice KN University, Ahmedabad
Faculty Coordinator Details (Name, Designation, Contact Details)	Prof. (Dr.) Hiral Panchal Principal School/ Faculty of Pharmacy KN University, Ahmedabad
Student Coordinator Details	-

Objective of the Event:

1. **To provide fundamental understanding** of the principles and working of UV-Visible Spectrophotometry, including absorption of light and electronic transitions.
2. **To familiarize students with instrumentation**, including components such as light source, monochromator, sample holder, and detector.
3. **To bridge theory with practice** by demonstrating real-time operation of the UV-Visible Spectrophotometer.
4. **To enhance analytical skills** through hands-on experience in sample preparation, calibration, and measurement techniques.
5. **To understand Beer-Lambert Law** and its application in quantitative analysis of pharmaceutical compounds.
6. **To develop competency in data interpretation**, including preparation of calibration curves and calculation of concentration.
7. **To introduce applications in pharmaceutical analysis**, such as drug estimation, dissolution studies, and quality control testing.
8. **To ensure proper handling and maintenance awareness** of the instrument, including do's and don'ts, troubleshooting, and safety precautions.
9. **To prepare students for academic and professional applications**, including laboratory work, research projects, and industrial practices.

Flow of the Event:

The workshop was organised by School/ Faculty of Pharmacy, KN University, Ahmedabad. The session commenced with arrival of Chief Guest Prof. Shailendra Saraf, Director, NIPER, Ahmedabad; Prof. (Dr.) Vijay Kumar Srivastava, Hon'ble Vice Chancellor, KN University; Speaker Dr. Nitish Sharma, Assistant Professor, NIPER, Ahmedabad; Prof. Man Singh, Professor of Practice, KN University followed by lamp lightening and felicitation of dignitaries.

Event was started with Research Collaboration agreement signing and exchange between National Institute of Pharmaceutical Research (NIPER), Ahmedabad and KN University, Ahmedabad; exchange procedure by Prof. Shailendra Saraf, Director, NIPER, Ahmedabad; Prof. (Dr.) Vijay Kumar Srivastava, Hon'ble Vice Chancellor, KN University in presence of Shri Alok Kumar Singh, Registrar, KN University and Prof. (Dr.) Hiral Panchal, Principal, School/Faculty of Pharmacy, KN University.

Later, the 1st Speaker session by Dr. Nitish Sharma was on "Basics of UV Visible Spectrophotometer" provided a strong foundational understanding of spectroscopic analysis. The session emphasized the **basic principles of spectroscopy**, including the interaction of electromagnetic radiation with matter and the concept of absorption of light. Dr. Sharma elaborated on the **working principle of the UV-Visible Spectrophotometer**, highlighting key aspects such as wavelength selection, electronic transitions, and absorbance measurement. He also discussed the **Beer-Lambert Law** and its significance in quantitative analysis.

2nd Speaker session was by Prof. Man Singh on "Applications of UV Visible Spectrophotometer". The session focused on the diverse and practical applications of UV-Visible spectroscopy in the field of pharmaceutical sciences and research. Prof. Singh highlighted the use of UV-Visible Spectrophotometry in **quantitative estimation of drugs, dissolution studies, and quality control analysis**. He explained how this technique plays a vital role in determining the concentration and purity of pharmaceutical compounds.

3rd session was Hand On Workshop on UV Visible Spectrophotometry" Practical Session by Prof. (Dr.) Hiral Panchal. The practical session of the **"Hands-on Workshop on UV-Visible**

Spectrophotometry” was effectively conducted by **Prof. (Dr.) Hiral Panchal**, providing students with real-time exposure to the operation and application of the instrument.

During the session, students were introduced to the **UV-Visible Spectrophotometer** and its functional components through a live demonstration. Step-by-step guidance was provided on **instrument handling**, including switching on the system, baseline correction, wavelength selection, and proper use of cuvettes.

Prof. Panchal demonstrated the **preparation of standard and sample solutions**, followed by the procedure for measuring absorbance at specific wavelengths. Students actively participated in performing the experiment, which enhanced their understanding of the **Beer-Lambert Law** and its practical application in determining the concentration of a given sample.

The session also emphasized **good laboratory practices**, such as proper cleaning of cuvettes, avoiding contamination, and ensuring accuracy and precision in measurements. Common sources of errors and troubleshooting techniques were discussed to help students achieve reliable results

Overall, the session provided valuable insights into the practical relevance of the technique, complementing the theoretical concepts and hands-on experience gained during the workshop.

Conclusion:

The **Hands-on Workshop on UV-Visible Spectrophotometer** proved to be a highly informative and enriching learning experience for B.Pharm Semester II and IV students at KN University, Ahmedabad. The workshop successfully integrated theoretical knowledge with practical application through well-structured expert sessions and an interactive laboratory demonstration.

The sessions conducted by Dr. Nitish Sharma and Prof. Man Singh provided a strong conceptual foundation and highlighted the wide-ranging applications of UV-Visible Spectrophotometry in pharmaceutical analysis, research, and industry. Their insights enabled students to appreciate the importance of this analytical technique in real-world scenarios.

The practical session conducted by Prof. (Dr.) Hiral Panchal played a crucial role in enhancing students' technical competencies by offering hands-on experience with the instrument. Students gained confidence in operating the spectrophotometer, preparing samples, and interpreting analytical data.

Overall, the workshop fostered critical thinking, improved analytical skills, and encouraged active participation among students. It served as a valuable platform to bridge the gap between classroom learning and laboratory practice, thereby preparing students for future academic, research, and industrial challenges in the field of pharmaceutical sciences.

Photograph



