

## ANALYTICAL TECHNIQUES SUMMER / WINTER CAMP (#One Month)

B .V. Patel Pharmaceutical Education and Research Development (PERD) Centre, Thaltej, Ahmedabad

Details	Module 1	Module 2	Module 3	Module 4
	<p style="text-align: center;"><b>Spectral Analysis Theory sessions</b></p> <ul style="list-style-type: none"> <li>UV Spectroscopy: Quantification of multicomponent samples by absorbance correction, simultaneous estimation, ratio absorbance and derivative - spectrophotometry</li> <li>Mass Spectrometry: Fragmentation patterns, nitrogen and ring rules, McLafferty rearrangement.</li> <li>NMR Spectroscopy: Magnetic nuclei, resonance, chemical shift and shielding deshielding phenomenon, spin-spin splitting and its origin, Pascal's triangle, coupling constant.</li> </ul> <p style="text-align: center;"><b>Practical demonstration of mass spectrometer</b></p>	<p style="text-align: center;"><b>Thermal analysis Theory sessions</b></p> <ul style="list-style-type: none"> <li>The basis of Thermal Analysis,</li> <li>Differential Thermal Analysis (DTA): principle, interpretation of thermogram, industrial applications and case studies.</li> <li>Differential Scanning Calorimetry (DSC): principle, interpretation of thermogram and industrial application, concept and application of mDSC and case studies.</li> <li>Thermo gravimetric Analysis (TGA): principle, interpretation of thermogram and industrial application and case studies.</li> </ul> <p style="text-align: center;"><b>Practical demonstration of DSC</b></p>	<p style="text-align: center;"><b>Column Chromatography Theory sessions</b></p> <ul style="list-style-type: none"> <li>High Pressure Liquid Chromatography(HPLC) : Principle, instrumentation, peak shapes, capacity factor, selectivity, plate number, plate height, resolution, band broadening, pumps, injector, detectors, columns, column problems, gradient HPLC, HPLC solvents, trouble shooting, sample preparation, method development.</li> </ul> <p style="text-align: center;"><b>Practical Demonstration of HPLC</b></p>	<p style="text-align: center;"><b>Analytical Data Interpretation</b></p> <ul style="list-style-type: none"> <li>UV Spectroscopy: Woodward-Fieser, Fieser-Kuhn and Nelson rules.</li> <li>IR Spectroscopy: Interpretation of IR spectra and determination of functional groups.</li> <li>Mass Spectrometry: Interpretation of mass spectra</li> <li>NMR Spectroscopy: Interpretation of NMR spectra</li> </ul> <p style="text-align: center;"><b>Case studies</b></p>
<b>Fees/ time</b>				
<b>Individual</b>	<b>Rs. 5000/-</b>	<b>Rs. 4500/-</b>	<b>Rs. 5000/-</b>	<b>Rs 4500/-</b>
<b>Group of 5 maximum upto 10</b>	<b>Rs. 4000/- per individual</b>	<b>Rs. 3500/- per individual</b>	<b>Rs. 4000/- per individual</b>	<b>Rs. 3500/- per Individual</b>

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Phone: 079-27439375, 27416409. # Four hours a day, 5 days in a week.