

UV-Visible Spectrophotometer



Make: Shimadzu, Japan

Model: UV-1900i

Date of Installation: 07/07/2021

It is an instrument of basic need in research including life sciences and common analysis. The instrument features an adjustable slit width and features analytical measurements like full spectrum, absorbance and kinetic modes.

Essential Features:

Photometric system: Double-beam Optics

Wave length Range: 190-1100 nm Wavelength Accuracy: ± 0.3 nm

Wavelength Repeatability: ± 0.1 nm Resolution: < 1 nm

Maximum Absorption: 8 (abs)

Photometric range: Absorbance: -0.5 to +1.0 Abs Transmittance: 0.0 to 300%

LabSolutions UV-Vis software with easy-to-use is included as standard.

User Instructions:

- The samples can be analyzed in the form of solid and liquid.
- For powder samples about 1mg fine powder may be needed for the analysis.
- For liquid samples about 1 mL may be needed and solvent is also required for background correction and to adjust sample for proper concentration.

Contact Us:

Faculty in charge: Dr. Minaketan Sahoo

E-mail: iptcilf@gmail.com

Contact number: +91 9439005051

UV-Visible Spectrophotometer



Make: Elico Ltd, India

Model: SL 210

Date of Installation: 30/03/2015

It is an instrument of basic need in research including life sciences and common analysis. The instrument features an adjustable slit width and features analytical measurements like full spectrum, absorbance and kinetic modes.

Essential Features:

Photometric system: Double-beam Optics

Wave length Range: 190-1100 nm

Photometric accuracy: ± 0.002

Photometric Repeatability: ± 0.001

Resolution: 1 nm

Maximum Absorption: 8 (abs)

Photometric range: Absorbance: -0.5 to + 3.0 Abs

Transmittance: 0.0 to 300%

LCD display and function keys

User Instructions:

- The samples can be analyzed in the form of solid and liquid.
- For powder samples about 1 mg fine powder may be needed for the analysis.
- For liquid samples about 1 mL may be needed and solvent is also required for background correction and to adjust sample for proper concentration.

Contact Us:

Faculty in charge: Mrs. Bipasha Behera

E-mail: iptcilf@gmail.com

Contact number: +91 9438277005

UV-Visible Spectrophotometer



Make: Shimadzu, Japan

Model: UV-1700

Date of Installation: 19/11/2004

It is an instrument of basic need in research including life sciences and common analysis. The instrument features an adjustable slit width and features analytical measurements like full spectrum, Absorbance and kinetic modes.

Essential Features:

Wave length Range: 200 nm to 600 nm

Resolution: 0.1 nm

Maximum Absorption: 8 (abs)

Photometric system: Double-beam Optics

Wave length Range: 190-1100 nm

Wavelength Accuracy: +/-0.3 nm

Wavelength Repeatability: +/-0.1 nm

Resolution: 0.1 nm

Maximum Absorption: 8 (abs)

Photometric range: Absorbance: -0.5 to +3.0 Abs

Transmittance: 0.0 to 300%

User Instructions:

- The samples can be analyzed in the form of solid and liquid.
- For powder samples about 1mg fine powder may be needed for the analysis.
- For liquid samples about 1 mL may be needed and solvent is also required for background correction and to adjust sample for proper concentration.

Contact Us:

Faculty in charge: Mrs. Bipasha Behera

E-mail: iptcilf@gmail.com

Contact number: +91 9438277005

Fourier Transform Infrared Spectrometer (FTIR ATR)



Make: Bruker, Germany

Model: Alpha with ZnSe crystal

Date of Installation: 01/06/2017

It is an instrument of basic need in research including life sciences and common analysis. The Fourier transform infrared spectrometer can perform functional group analysis of solids, thin-films and liquids. This ATR combines cost-efficiency with great performance. It features a large, high-throughput ZnSe crystal that is suitable for most applications that do not involve very hard or acidic samples. It is easy to apply, convenient to clean and analyzes solids or liquids.

Essential Features:

Technology: Attenuated Total Reflectance (ATR) Wave length Range: 200 nm to 600 nm

Spectral resolution of FTIR: 0.2 cm^{-1}

Focal plane array: $6000\text{-}600 \text{ cm}^{-1}$

User Instructions:

- The samples can be analyzed in the form of powder, solid, liquid and thin films.
- Provide solid samples in powder form. Minimum amount required 5-10 mg.
- Samples may be in liquid form. Minimum amount required 1 mL.
- Samples can be submitted as thin films.
- Operating pH for liquids: 4-8 pH.

Contact Us:

Faculty in charge: Dr. Sidhartha Sankar Kar

E-mail: iptcilf@gmail.com

Contact number: +91 7978291280

High Performance Liquid Chromatography (HPLC)



Make: Shimadzu, Japan

Model: LC-10AT VP SPD-10A VP/10 AV VP

Date of Installation: 15/09/2004

It is an instrument of basic need in research including life sciences and common analysis. The HPLC system is equipped for routine chromatographic analysis of small organic drugs and pharmaceutical preparations.

Essential Features:

Pump: Single Pump

No. of eluents: 1

Composition range: 0-100%

Sample Injection System: Manual injector

Column: C18

Flow rate Analytical - 0.2 - 5.0 mL/min

Detector: UV –Vis

Composition accuracy: $\pm 0.5\%$ (independent of Back Pressure)

User Instructions:

- The samples can be analyzed in the form of solution.
- For powder samples about 5 mg fine powder may be needed for the analysis.
- For liquid samples about 1 mL may be needed and solvent is also required for background correction and to adjust sample for proper concentration.

Contact Us:

Faculty in charge: Dr. Saroj Kumar Patro

E-mail: iptciltf@gmail.com

Contact number: +91 7978596855

Flame Photometer



Make: Elico Ltd, India

Model: CL378

Date of Installation: 30/03/2015

This instrument can simultaneously analyze Na, K, Li, Ca and Ba in single aspiration of the sample with proper removal of interferences. The instrument carries advanced features like automatic ignition, automatic gas shut off in case of power failure.

Accessories supplied: Filters for Na, K, Air compressor with buffer tank, Cleaning wire.

Essential Features:

Aspiration: 3 to 6 mL/min.

Detector: Silicon Photodiode

Flame system: LPG & Oil free dry air

Linearity: Better than 2%

Calibration curve programmability can be done using a maximum of 20 standards in the range of interest of the user, data processing through optional curve fitting techniques like segmental and quadratic.

User Instructions:

- The samples can be analyzed in the form of solution.
- For powder samples about 5 mg fine powder may be needed for the analysis.
- For liquid samples about 1 mL may be needed

Contact Us:

Faculty in charge: Dr. Saroj Kumar Patro

E-mail: iptcilf@gmail.com

Contact number: +91 7978596855