



**GALGOTIAS  
UNIVERSITY**  
— Uttar Pradesh —  
**CREATING KNOWLEDGE**

**3.1.5**

**Central Instrumentation Facility**

**Galgotias University**

Plot No. 2, Yamuna Expressway,  
Opposite, Buddha International Circuit,  
Sector 17A, Greater Noida,  
Uttar Pradesh 203201, India

DEAN  
SCHOOL OF MEDICAL  
& ALLIED SCIENCES  
GALGOTIAS UNIVERSITY  
\* UTTAR PRADESH \*




## **Central Instrumentation Facility (CIF)**

The Innovation Centre, Galgotias University, has set up a full-fledged Central Instrumentation Facility (CIF) to support multi- disciplinary research areas like material sciences, bio sensors, organic photovoltaic and other emerging frontier fields. For excellence in teaching and research in school of studies at Galgotias University, Greater Noida state-of-the-art sophisticated equipment's, and various support facilities have been created. These equipment's and facilities help the faculty, research scholars and students to carry out globally competitive R & D in basic and applied science. Since individual researcher may not be able to generate huge research funds for the research instruments, a year's back Central Instrument Facility (CIF) was started in Galgotias University with a mission to enrich the resources on a shared basis for promoting R & D with the following objectives.

- ❖ To strengthen technical infrastructure to carry out advanced research in various science disciplines under one roof and make their services available to academic schools and departments.
- ❖ To organize short-term courses/workshops on the use and application of various spectroscopic and analytical technique for students, teachers and technical personnel from our university, affiliated institutions, Universities and Industry in the region.
- ❖ To develop new measurement / analytical techniques: Efforts are being made by the CIF to develop new techniques / methods of analysis to put the instruments to their full use and offer them to the scientists for exploring new dimensions in research in various areas of science and technology.
- ❖ To allow outside users to utilize CIF equipment on a nominal payment basis.


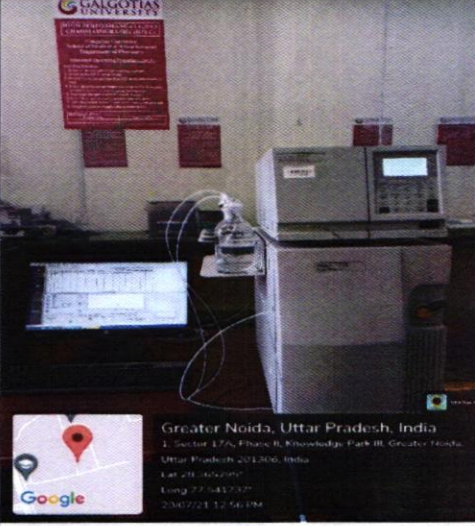
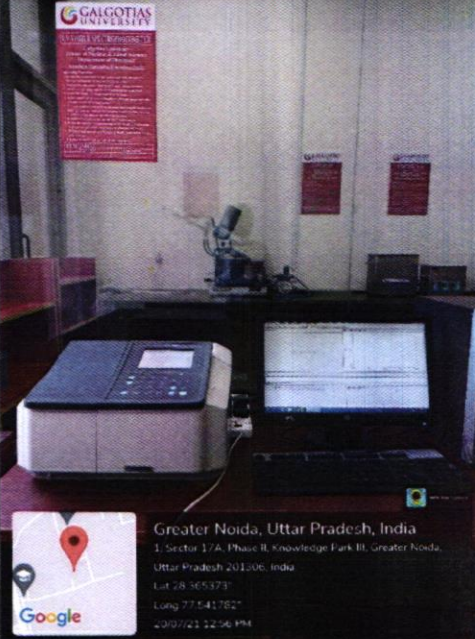
### **1. Infrastructural Facilities**

The structure of CIF facility includes the approximately area 2410 square feet of different specified working area, like sophisticated and general instrument area.



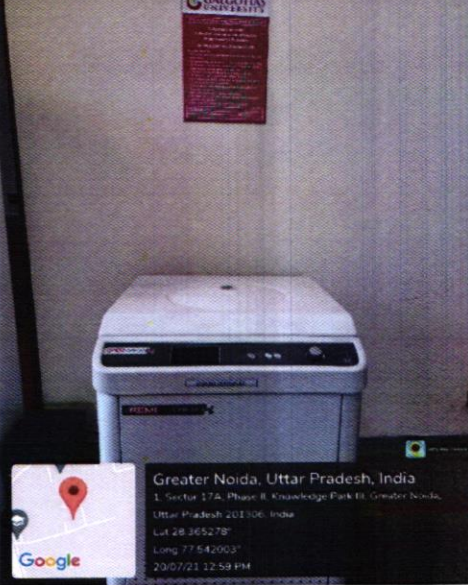
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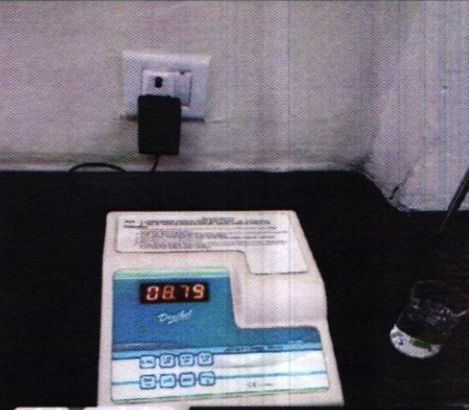
Instrument	Description	
Fourier Transform Infra Red (FTIR)	It is used for chemical analysis and enables for quality control, quantifications and verification of raw materials. The sample, may it be solid, liquid or gas.	
High Pressure Liquid Chromatography (HPLC) with Manual Injector	It helps to analyze the advance traditional small molecule drugs: Medicinal chemistry, bioanalysis or small and large molecules, drug metabolism and pharmacokinetics (DMPK), methods development, impurities analysis, natural products, quality control (QC), process analysis, and manufacturing	
UV-Visible Spectrophotometer with UV-Probe 2.4.3	Spectrophotometer is a device that is used to measure the intensity of light as a function of the color of light. In clinical laboratories, spectrophotometers are used for many applications such as quantitative analyses, kinetics, spectrum scanning and multiple components DNA/protein testing.	



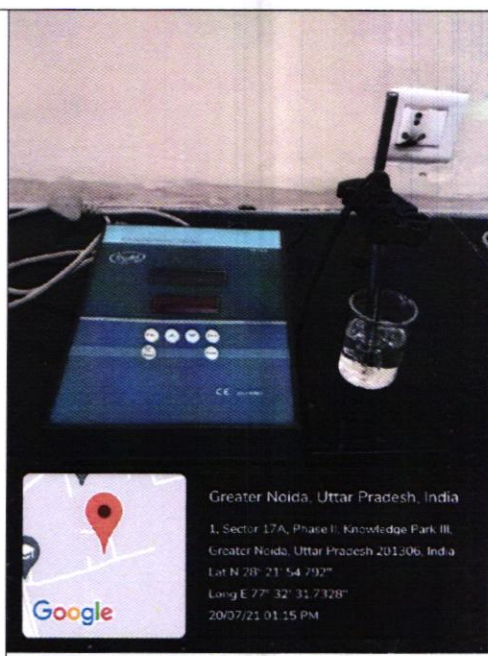
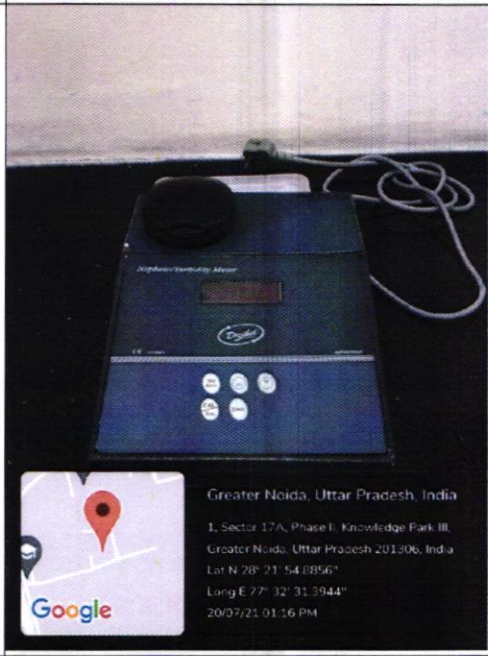
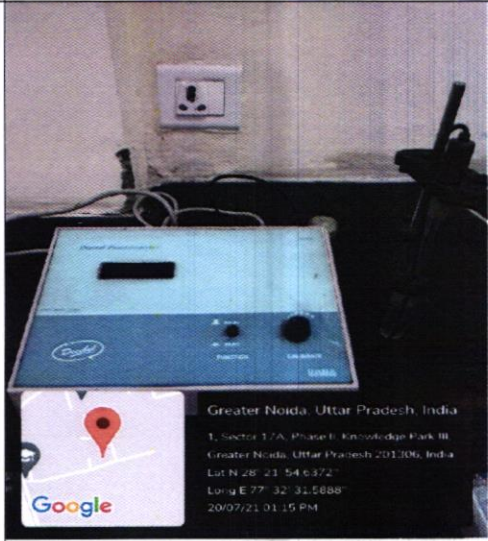
<p>High Speed Homogenizer</p>	<p>This laboratory instrument may be used for the homogenization of various types of material, such as drug mixtures or solutions or tissue, plant, food, soil, and many others.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III, Greater Noida,      Uttar Pradesh 201300, India      Lat: 28.365275°      Long: 77.542993°      23/07/21 04:29 PM</p>
<p>Deep freezer (- 80 0C)</p>	<p>This deep freezer is used to preserve and store medical products, blood samples, medicines and injections, food products, etc. for a long period of time.</p>	 <p>SHOT ON MI A3      BY SHAKYA</p>
<p>High Speed Cooling Centrifuge (2-8 0C)</p>	<p>This is a type of refrigerated centrifuge that is capable of high speeds of up to 60,000g. As such, they can produce significant force that is used for the purposes of collecting drug formulations parts, cellular debris, micro-organisms as well as larger cell organelles and proteins.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III, Greater Noida,      Uttar Pradesh 201300, India      Lat: 28.365278°      Long: 77.542993°      20/07/21 12:59 PM</p>


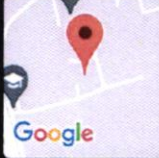

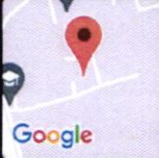

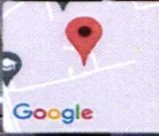
  
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<p>Ultra Sonicator with Temperature Control</p>	<p>Sonication is the mechanism used in ultrasonic cleaning loosening particles adhering to surfaces. In addition to laboratory science applications sonicating baths have applications including cleaning objects such as spectacles and jewelry etc.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III, Greater Noida,      Uttar Pradesh 201306, India      Lat: 28.365275°      Long: 77.541993°      23/07/21, 04:29 PM</p>
<p>Vortex Mixer</p>	<p>The vortex mixer is a vital piece of equipment used to mix small samples of liquids in various research settings rapidly. Vortex mixers are frequently utilized for cell disruption or homogenization. The device can operate at a speed of 250 – 2,500 rpm and weighs around 6 lbs.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III,      Greater Noida, Uttar Pradesh 201306, India      Lat: N 28° 21' 55.476"      Long: E 77° 32' 31.0344"      20/07/21, 01:09 PM</p>
<p>Automatic pH-Meter</p>	<p>A pH meter is an instrument used to measure acidity or alkalinity of a solution.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III,      Greater Noida, Uttar Pradesh 201306, India      Lat: N 28° 21' 55.1232"      Long: E 77° 32' 31.0600"      20/07/21, 01:16 PM</p>



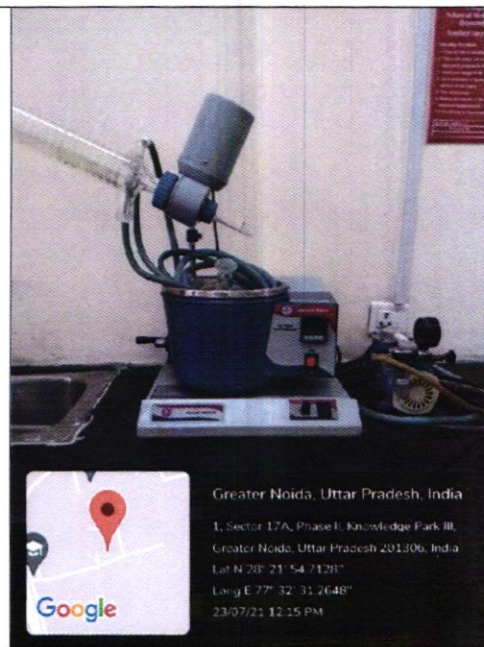
<p>ConductivityMeter</p>	<p>An electrical conductivity meter (EC meter) measures the electrical conductivity in a solution. It has multiple applications in research and engineering, with common usage in hydroponics, aquaculture, aquaponics, and freshwater systems to monitor the amount of nutrients, salts or impurities in the water.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III,      Greater Noida, Uttar Pradesh 201306, India      Lat N 28° 21' 54.7927"      Long E 77° 32' 31.7328"      20/07/21 01:15 PM</p>
<p>Auto Colorimeter</p>	<p>A laboratory colorimeter, also referred to as a digital colorimeter, is an instrument used to measure the absorbance of wavelengths of light at a particular frequency (color) by a sample. In pharmaceutical field the use of bench top spectrophotometers for color measurement in a variety of applications. One use is to ensure that the color is consistent in the dosage.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III,      Greater Noida, Uttar Pradesh 201306, India      Lat N 28° 21' 54.8856"      Long E 77° 32' 31.9944"      20/07/21 01:16 PM</p>
<p>Potentiometer</p>	<p>Potentiometry is one of the methods of electroanalytical chemistry. It is usually employed to find the concentration of absolute in solution. In potentiometric measurements, the potential between two electrodes is measured using a high impedance voltmeter.</p>	 <p>Greater Noida, Uttar Pradesh, India      1, Sector 17A, Phase II, Knowledge Park III,      Greater Noida, Uttar Pradesh 201306, India      Lat N 28° 21' 54.6372"      Long E 77° 32' 31.5888"      20/07/21 01:15 PM</p>

<p>Photo-FluoroMeter</p>	<p>Digital Photo Fluorometer is designed for precise analysis of fluorophors such as vitamins, quinine, steroids, fluorescein, metal complexes, etc. The Fluorescence is caused by the absorption of radiant energy and the re-emission of some of its energy in the form of light.</p>	  <p>Greater Noida, Uttar Pradesh, India  1, Sector 17A, Phase II, Knowledge Park III,  Greater Noida, Uttar Pradesh 201306, India  Lat N 28° 21' 55.4652"  Long E 77° 32' 30.9768"  20/07/21 01:15 PM</p>
<p>Flame Photometer</p>	<p>A photoelectric flame photometer is a device used in inorganic chemical analysis to determine the concentration of certain metal ions, among them sodium, potassium, lithium, and calcium.</p>	  <p>Greater Noida, Uttar Pradesh, India  1, Sector 17A, Phase II, Knowledge Park III,  Greater Noida, Uttar Pradesh 201306, India  Lat N 28° 21' 55.0512"  Long E 77° 32' 31.2036"  20/07/21 01:15 PM</p>
<p>Laboratory Refrigerator(Air cooled)</p>	<p>This refrigerator is one of the most important equipment. Its function is to maintain, in a controlled environment (refrigerated space), various fluids and substances, so that they are kept in good condition the lower the temperature, the lower chemical and biological activity.</p>	  <p>Greater Noida, Uttar Pradesh, India  1, Sector 17A, Phase II, Knowledge Park III,  Greater Noida, Uttar Pradesh 201306, India  Lat N 28° 21' 54.7596"  Long E 77° 32' 31.5744"  20/07/21 01:17 PM</p>



### Rotatory Film Evaporator

The Rotary Film Evaporator is an instrument for an active and mild extraction of solvents by evaporation in chemical, pharmaceutical, cosmetics, herbal extraction and fragrances, and laboratories. It is essentially a distillation unit incorporating a rotating evaporation flask.



### 3. Waste disposal

The bio-waste disposal procedure is followed as per regulatory authorities' guidelines by 'Biowaste Management Agency'.

### 4. CIF Policy and Galgotias University Instruments Sample Analysis Charges

### 5. Sample Request Form

GLIMPSE OF CENTRAL INSTRUMENTATION FACILITY ROOM

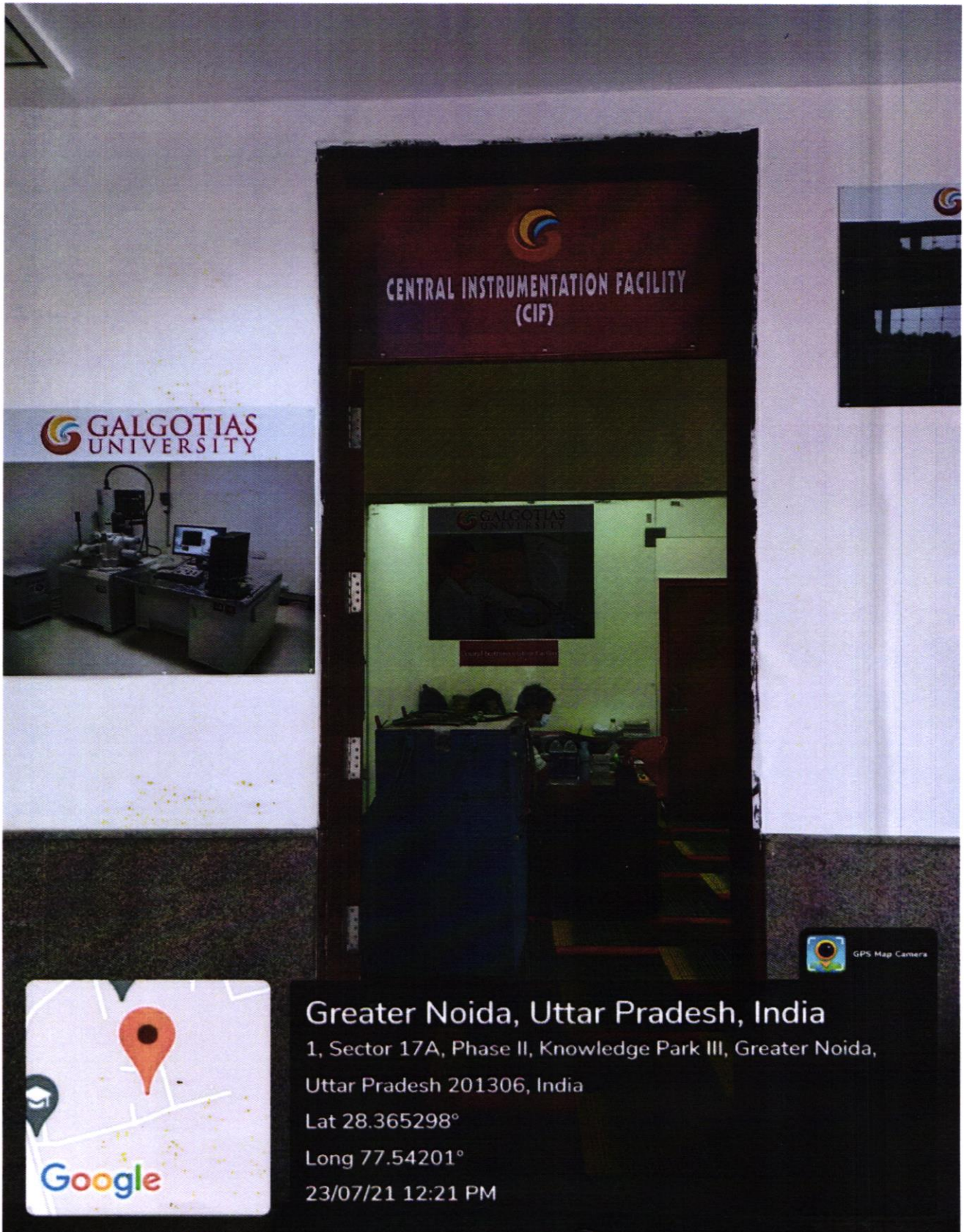


Fig. 2 Central Instrumentation Facility: Entry



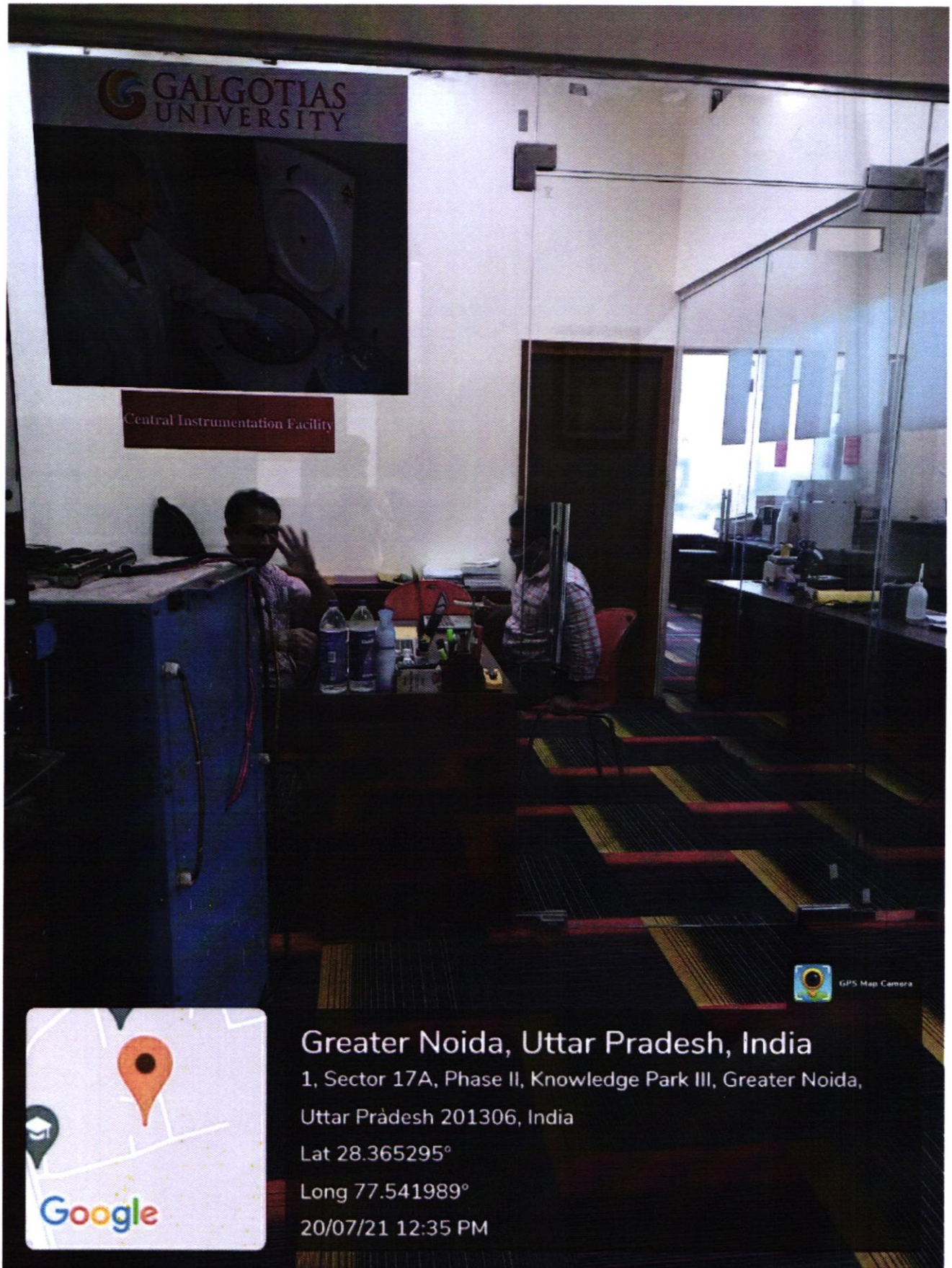
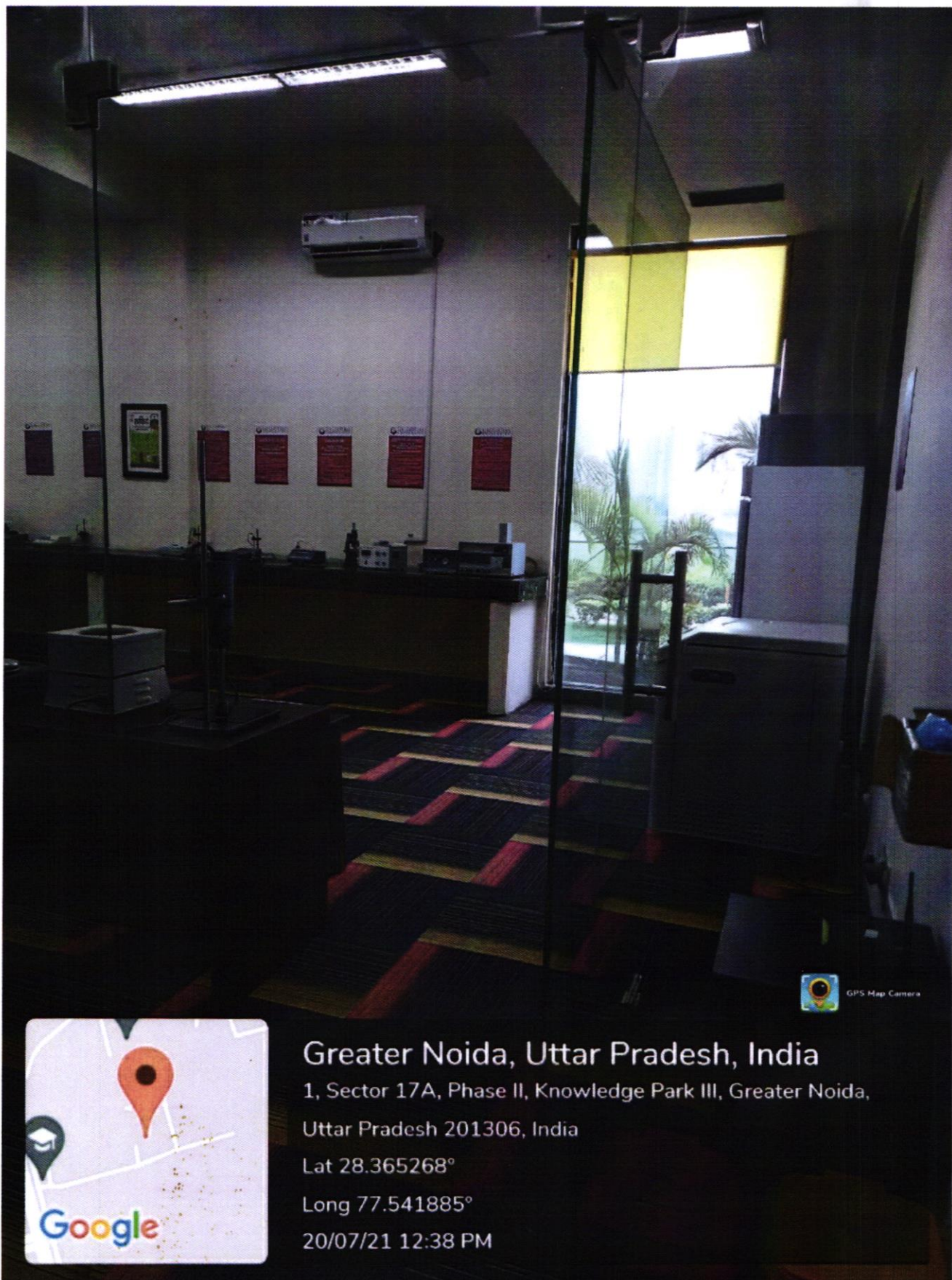


Fig. 3 Central Instrumentation Facility: Faculty Cabin



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Fig. 4 Central Instrumentation Facility: View-1

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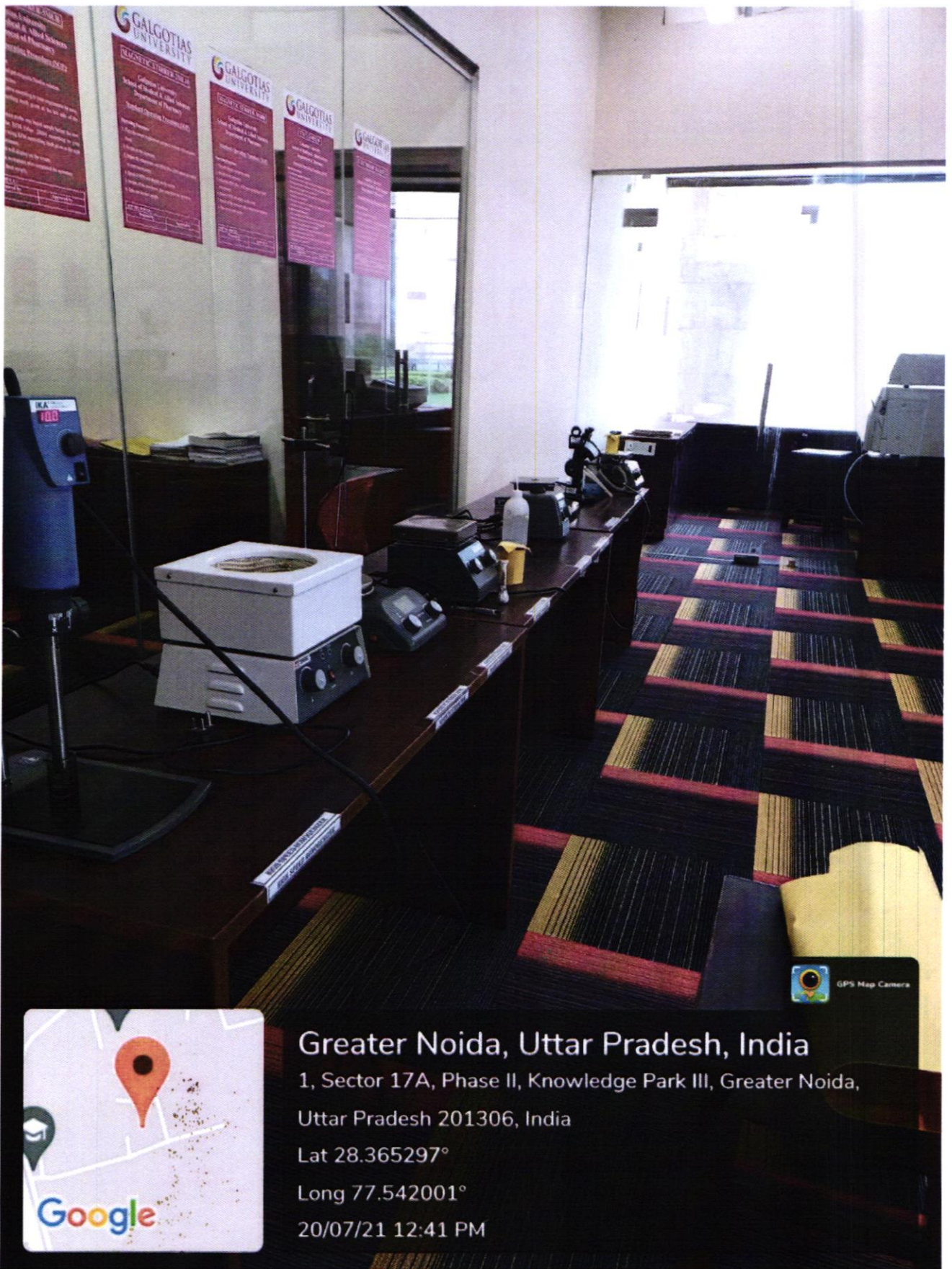
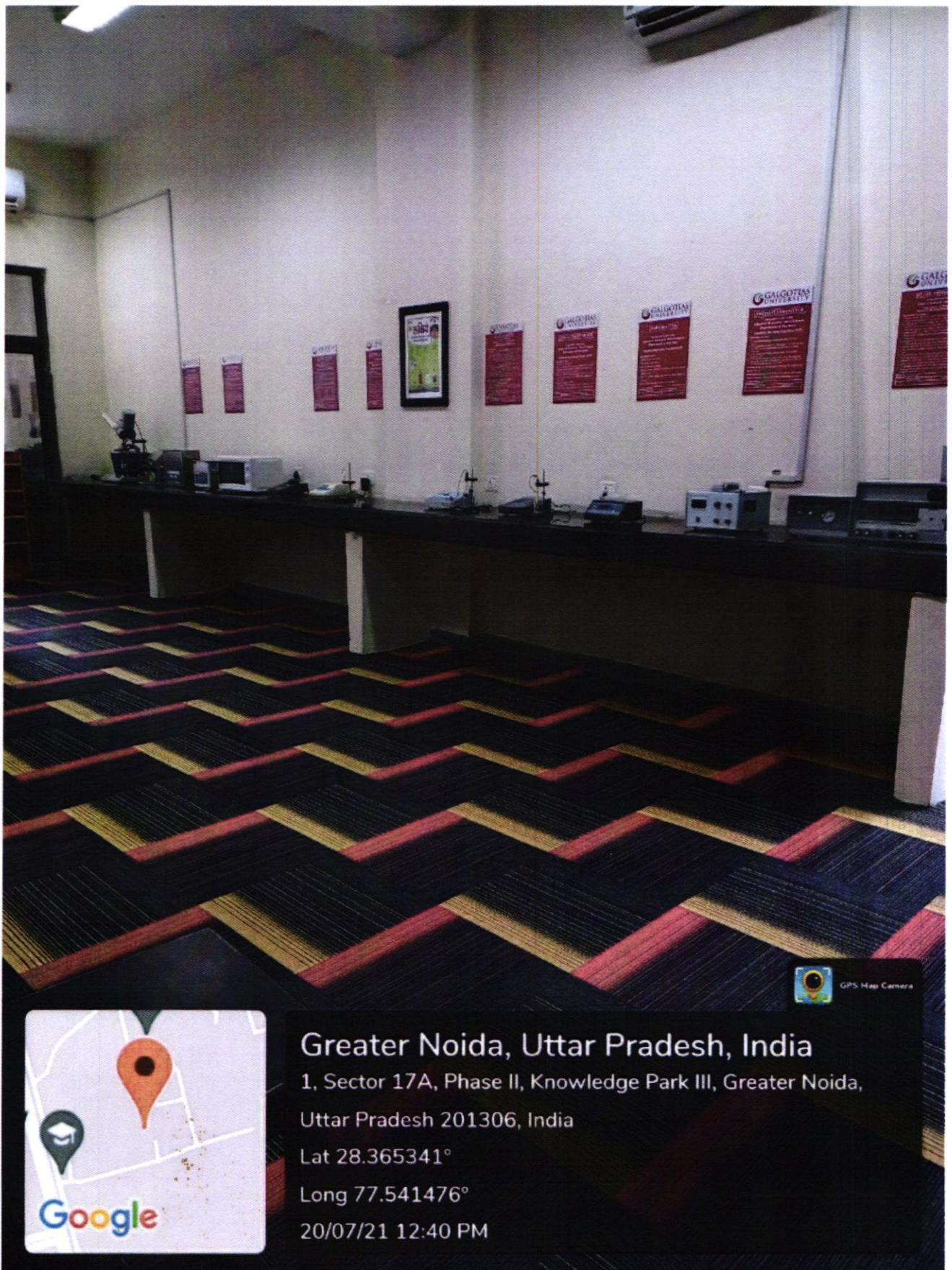


Fig. 5 Central Instrumentation Facility: View-2



Greater Noida, Uttar Pradesh, India

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Lat 28.365341°

Long 77.541476°

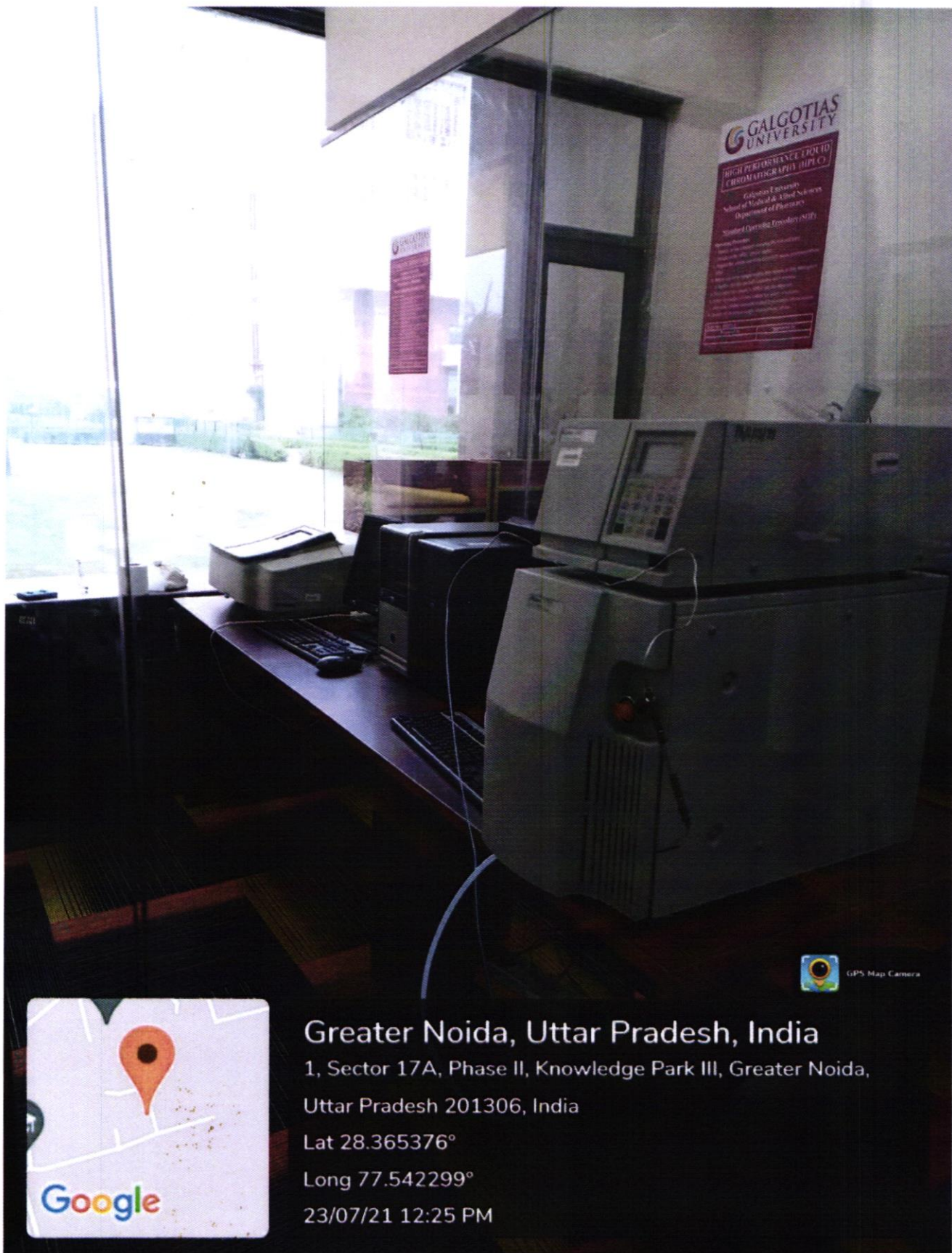
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Fig. 6 Central Instrumentation Facility: View-3

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Lat 28.365376°

Long 77.542299°

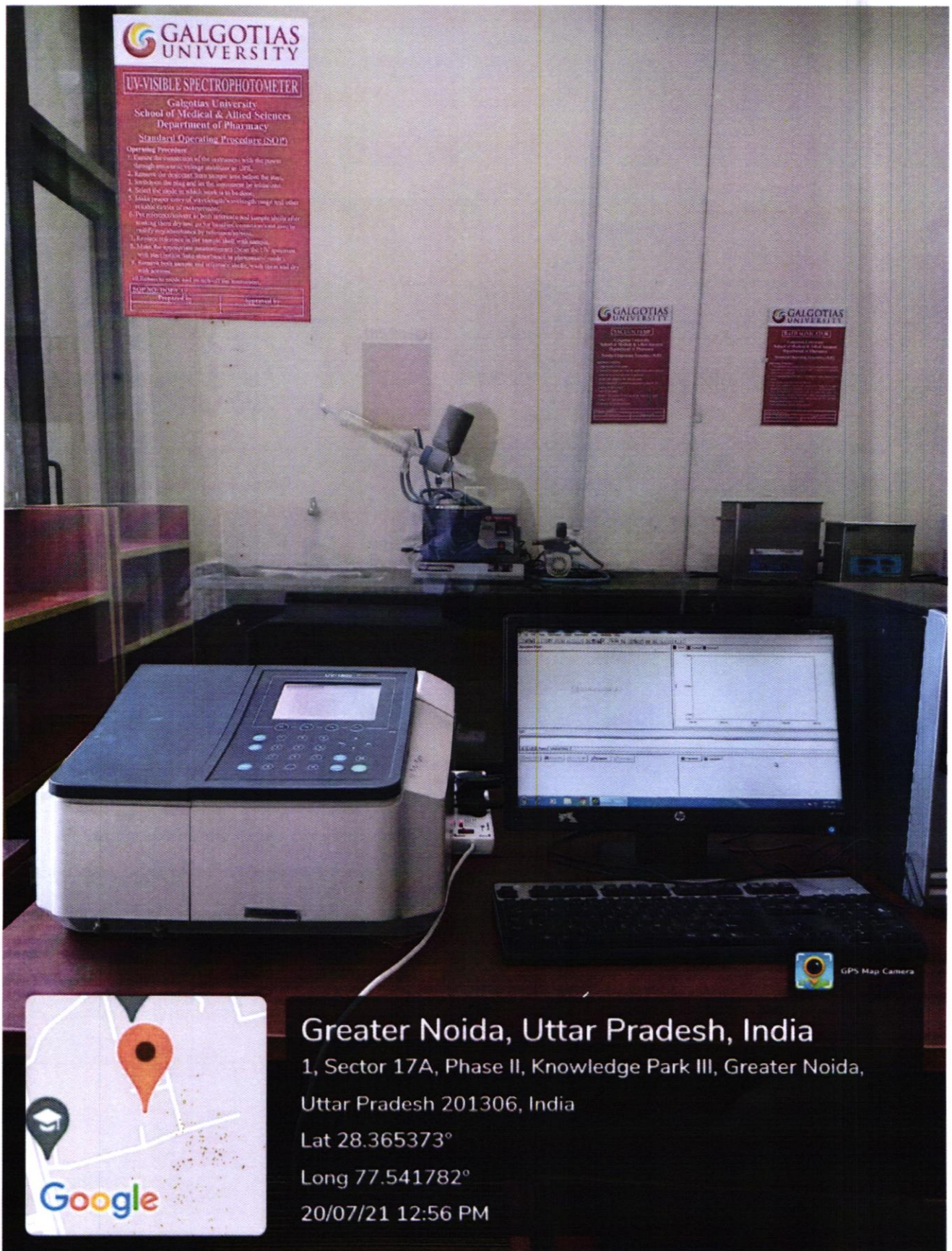
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**Fig. 7 Central Instrumentation Facility: High Performance Liquid Chromatography (HPLC)**

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**Fig. 8 Central Instrumentation Facility: UV-Vis Spectrophotometer**


  
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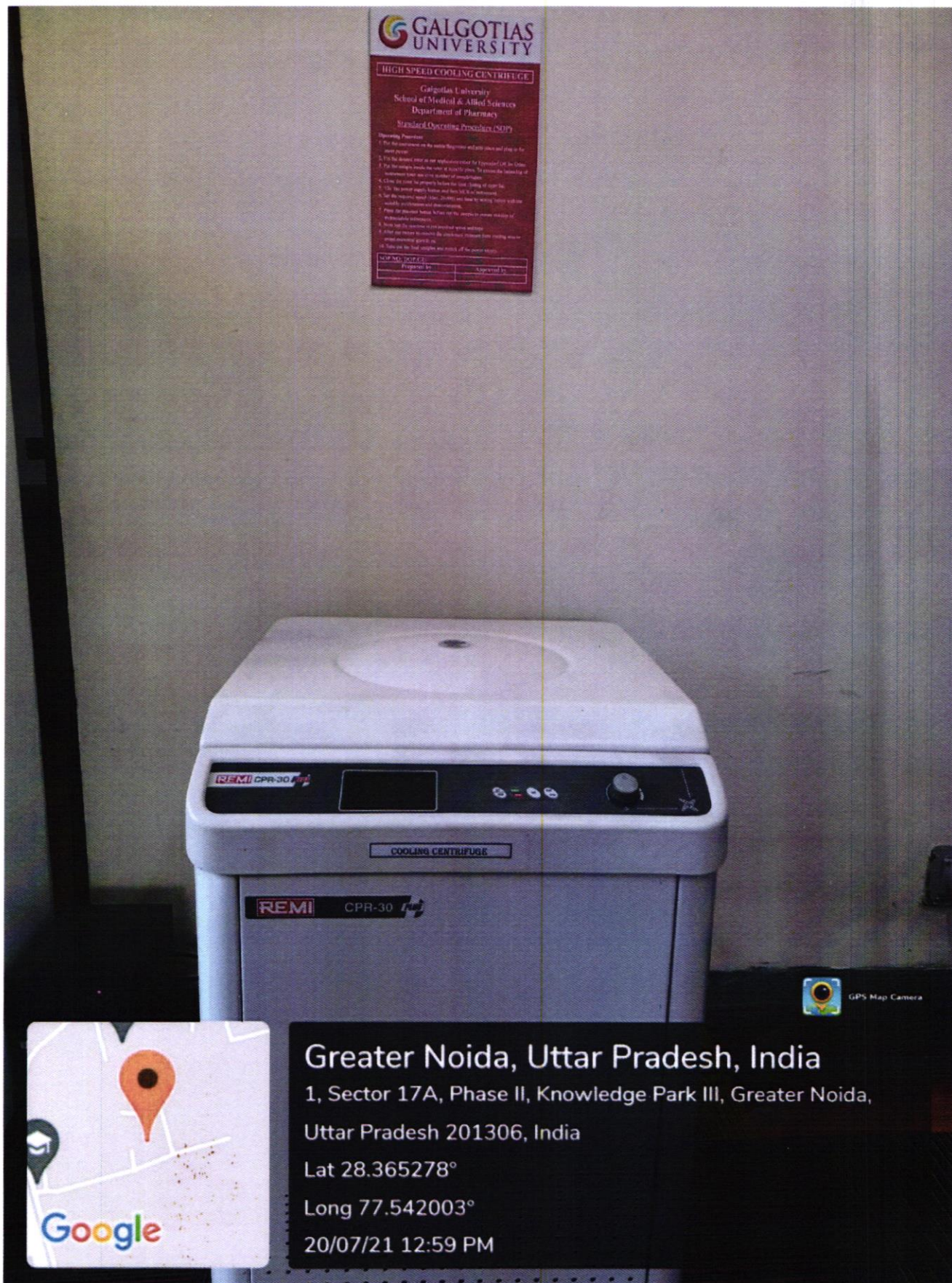







Fig. 9 Central Instrumentation Facility: Laboratory Refrigerator



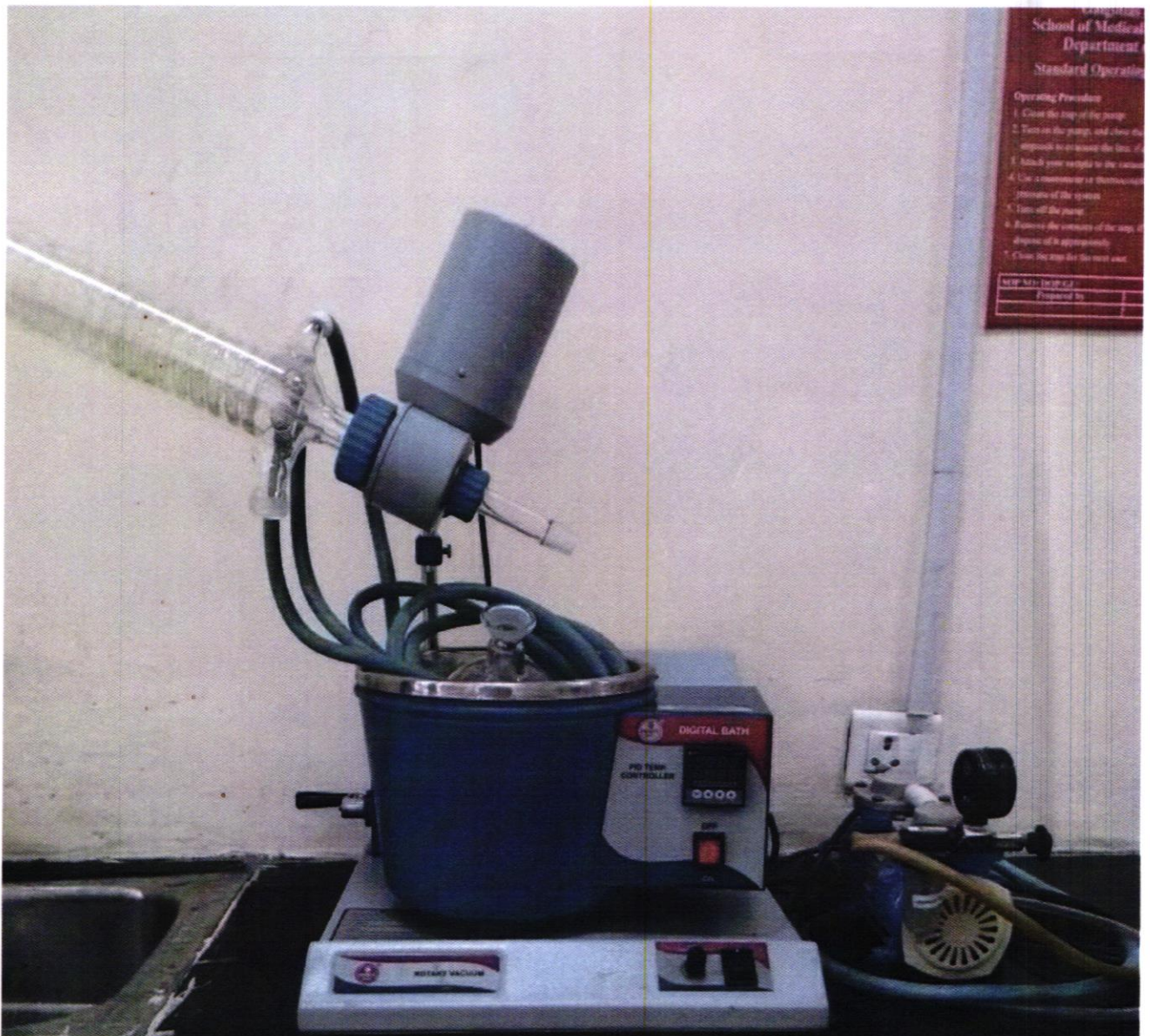


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 Uttar Pradesh 201306, India  
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Fig. 10 Central Instrumentation Facility: High Speed Cooling Centrifuge

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Lat N 28° 21' 54.7128"

Long E 77° 32' 31.2648"

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**Fig. 11 Central Instrumentation Facility: Rotatory Film Evaporator**

