



Shiksha Mandal's
Bajaj College of Science, Wardha
(An Autonomous Institution)



**Sophisticated Analytical Instrument Facility
(SAIF)**

About the Facility

SAIF (Formerly Central Instrumentation Center), at Bajaj College of Science, Wardha has been established in the year 2017 with the aim of providing a central facility of latest and advanced analytical techniques for research in various areas of science and technology. It houses several sophisticated and modern analytical equipment offering its users, a wide range of analytical methods / techniques for analysis / testing/ characterization enabling them to keep pace with developments taking place globally, publish their research findings in peer reviewed journals and through their concerted efforts contribute to the upliftment of the society at large. This facility is supported by DST-FIST. This facility can be used by undergraduate, postgraduate, doctoral students and faculty members. The facility is also extended to external organizations, mainly academic institutions in the nearby region, on a chargeable basis. This facility can also be used for organizing short term courses/ workshops on the use and application of various advanced instruments and analytical techniques.

Objectives of the Facility

- Providing access to advanced research equipment and instrumentation
- Supporting interdisciplinary research collaborations
- Offering training and technical assistance to researchers and students
- Promoting innovation and discovery in various fields of study
- Enhancing the quality of research output of the institute
- Fostering partnerships with industry and other research institutions
- Social academic outreach

Equipment Available for Testing and Consultancy Services

1. Rigaku Miniflex 600 X-ray Diffractometer

- Purpose: Crystallographic analysis in materials science and chemistry
- Features: Advanced features for high-resolution X-ray diffraction measurements
- Applications: Study of structural properties of crystalline materials (powders, glass/polymers and nanomaterials)
- Year of Purchase: 2017
- Funding Agency: UGC-CPE (Phase II)
- Per Sample Testing Charges: Rs. 300/-



2. Bruker's ATR mode Fourier Transform Infrared Spectrophotometer:

- Purpose: Precise infrared spectroscopic measurements
- Features: Attenuated Total Reflectance (ATR) sampling technique for analysis of solid, liquid, and gas samples without extensive preparation
- Applications: Analysis of various sample types including liquids, pastes, powders, pellets, and finished products
- Year of Purchase: 2011
- Funding Agency: UGC-CPE (Phase 1)
- Per Sample Testing Charges: Rs. 150/-



3. Shimadzu's UV-vis. Spectrophotometer 1800:

- Purpose: Analyzing the optical properties of various substances
 - Features: Precision Czerny-Turner optical system for high-quality absorbance and transmittance measurements of liquid samples
 - Applications: Used for analyzing the optical properties of substances in fields such as chemistry, biology, environmental science, and material science
- Year of Purchase: 2014
- Funding Agency: UGC DBT-Star College Scheme
- Per Sample Testing Charges: Rs. 150/- (Water and Ethanol)



4. Shimadzu's GC-2014C AFsc:

- Features: Equipped with an FID detector and a BP-5 capillary column
 - Applications: Separation and analysis of complex mixtures of volatile compounds including aromatics, pesticides, herbicides, drugs of abuse, hydrocarbons, solvent impurities, essential oils, and semi-volatiles
- Purpose: Indispensable tool for chemical analysis and research
- Year of Purchase: 2023
- Funding Agency: DST-FIST
- Per Sample Testing Charges: Rs. 500/-



5. Elementar's Unicube Plus CHNS Analyzer:

- Purpose: Accurate simultaneous or combined measurements of carbon, hydrogen, nitrogen, and sulfur content in various samples
- Features: Direct temperature program desorption (TPD) technology for perfect separation of gaseous components
- Applications: Used for micro elemental analysis in a wide range of samples
- Year of Purchase: 2023
- Funding Agency: DST-FIST
- Per Sample Testing Charges: Rs. 500/-



6. Biorad's Polymerase Chain Reaction (PCR):

- Purpose: DNA amplification and analysis in molecular biology and genetic research
- Features: Enables thermal cycling for DNA amplification, precise temperature control, and fluorescence detection for real-time PCR
- Applications: Used for gene expression analysis, genotyping, sequencing, and various molecular biology applications
- Year of Purchase: 2011
- Funding Agency: UGC CPE
- Per Sample Testing Charges: Rs. 500/-



7. Shimadzu's P-Series HPLC:

- Purpose: Precise and efficient separation and analysis of complex mixtures
 - Features: Equipped with an automated sampler, a reverse phase C18 column, a gradient mixer, and a PDA detector
 - Applications: Facilitates separation and precise assessment of complex mixtures of organic substances, pharmaceuticals, food and medications, nutraceuticals, and antibiotics
 - Year of Purchase: 2023
Funding Agency: DST-FIST
 - Per Sample Testing Charges: Rs. 500-1500/- (As per the method and run)
- *Sample charges are subject to our policies.**



Process of Availing the Services

- Contact us via phone or email to schedule the testing slot for your sample.
- Deposit the testing charges online as per the provided sample rates to the specified account.
- Download the instrument requisition form from our website and complete all required fields, including the transaction details.
- Post your samples, along with the hard copy of the completed requisition form, to the address provided below.
- Additionally, complete the online requisition form available on our website.
- Your data/results will be mailed within 10-15 days, although this timeframe may vary depending on the complexity of the request.

Account Details for Payment:

In favor of: J B College

Name of Bank : Canara Bank, Main Branch, Wardha.

Account Number : 2632101001707

IFSC Code : CNRB0002632

You may do transactions via NEFT/UPI/phonepe

Address for Communication:

The Incharge

SAIF,

Bajaj College of Science, Civil Lines,
Wardha-442001 (M.S.), India.

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SAIF Members

Name	Designation and Department	Responsibility
Prof. Pradip Tekade	Principal	Chairman of SAIF
Dr. Akhil Nakhate akhil.nakhate@gmail.com	Asst. Prof., Dept. of Chemistry	Faculty Incharge: SAIF GC Operations and Training
Dr. Mangesh Yerpude mangesh.yerpude@gmail.com	Asst. Prof., Dept. of Physics	Instrument Guardian: XRD Operations and Training
Dr. Dhiraj Naik naikdhiraj@gmail.com	Asst. Prof., Dept. of Botany	Instrument Guardian: HPLC Operations and Training
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Miss. Vaishnavi Gidmare	Operating Staff SAIF	Operations and maintenance
Ms. Aishwarya Umate	Operating Staff SAIF	Operations and maintenance
Shri. Prabhakar Kamde	Dept. of Physics Assistant	Consultancy Assistant

Policy for Testing and Consultancy

SCOPE OF SERVICES

Our testing analysis consultancy service offers expert analysis and interpretation of data to help clients identify and characterize the materials. Our team of experts will work closely with clients to understand their specific requirements and provide customized solutions to meet their needs.

FEES

We charge a fee for our testing analysis consultancy services, which may vary depending on the instrument and duration of the requirement. The fee will be communicated to the client in advance. Report writing for a particular sample can be provided on request with extra consultancy charges.

CONFIDENTIALITY

We understand the importance of confidentiality in our consultancy services. All data provided by the client will be treated as confidential and will not be shared with any third party without the client's prior consent.

DELIVERABLES

We will provide a detailed analysis report to the client, which will include a summary of the results, interpretation of the data, and recommendations for further analysis or testing, if required.

TURNAROUND TIME

We strive to provide our clients with timely and efficient services. The turnaround time for our testing analysis consultancy services may vary depending on the scope and complexity, but we will communicate the expected timeline to the client in advance.

QUALITY ASSURANCE

We are committed to providing high-quality consultancy services to our clients. Our team of experts follows strict quality control procedures to ensure accurate and reliable results.

LIABILITY

While we take all necessary precautions to ensure the accuracy of our analysis, we do not accept liability for any loss or damage that may arise from the use of our consultancy services.

Bajaj College of Science, Wardha

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