

**P. D. E. As.
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Akurdi Pune-44**

Incubation Centre



Incubation Centre Facilities

College has established Incubation Centre to enhance and share research facilities available in the college. The research facilities in Incubation centre for Physical, Chemical and Biological Sciences are described below.

Central Instrumentation Facility



High Performance Liquid Chromatography System:

- Isocratic Model with single wavelength detector.
- Application: quantitative analysis of organic compounds.
- In the college plant extract / tissue culture extracts are analyzed for organic compounds of interest.



Atomic Absorption Spectroscopy Instrument:

- Analysis of metals at low concentration.
- Metal ions Na, K, Ca, Mg, Cu, Zn, Fe, Pb, can be analysed as HCL of these metals are available with college.

Central Instrumentation Facility

TG-DT Analyser:

- Analysis of thermal decomposition temperature and quantitative analysis of thermally decomposable compounds.
- Thermal stability of compounds
- Temperature range 30 to 1100 °C.



UV-Visible Spectrophotometer:

- Range: 200 to 1100 nm
- Application:
 1. Recording UV-Visible spectrum of organic and inorganic compounds. Thereby characterization of organic and inorganic compounds.
 2. Quantitative analysis of organic and inorganic compounds.



Central Instrumentation Facility

Faculty Developed Equipment's



High Temperature DC Conductivity Equipment

- In house designed equipment for measurement of high temperature DC conductivity of inorganic materials.
- Temperature range: 30 to 600 °C.



Photocatalytic Reactor

- In house designed equipment for evaluation of photocatalytic activity of photo catalysts.
- Photocatalytic degradation of organic pollutants

Central Instrumentation Facility **Faculty Developed Equipment's**



Gas sensor Device

- In house designed Equipment
- Evaluation of gas sensing properties of the films and pellets of nano-metal oxides and other materials can be evaluated.



Lab-View Based Current – Voltage measurement and Cyclic Voltammetry measurement

- In house designed Equipment
- Determination I-V Characteristics of Dye sensitized Solar cell.
- Deamination of redox characteristics of metal ions.



Hydraulic Press

- In house fabricated Hydraulic press for preparation of tablets of oxides and other materials.

Central Instrumentation Facility
Faculty Developed Equipment's

Spin Coater

- Laboratory fabricated equipment for fabrication of thin films of metal oxides



Tissue Culture Facilities in Incubation Centre

Tissue culture is one of the major parts of research in the subject of Botany. Therefore, the College has established a separate tissue culture facility in the incubation centre. All the facilities required for tissue culture are established in this laboratory.



Incubation room



Incubation room



Laminar Air Flow



Shaker Incubator



PCR Thermocycler



Electrophoresis

Services Offered

Though incubation centre college, we provide following services to the students, researchers, academician of our and other colleges and research institutes.

A) Analysis of Sample

- 1) TG-DT analysis
- 2) HPLC analysis
- 3) AAS analysis
- 4) UV-Visible analysis

B) Hands on Trainings to students and teachers

- 1) Hands on training on instrument handling and analysis using TG-DT analyzer, AAS spectrophotometer, HPLC system and UV-Visible spectrophotometer to the UG and PG students of our and colleges nearby.
- 2) Hands on training on instrument handling and analysis using TG-DT analyzer, AAS spectrophotometer, HPLC system and UV-Visible spectrophotometer to the faculty of our faculty and faculty of colleges nearby.
- 3) Facility of tissue culture is made available to the students of our colleges as well as teachers of nearby colleges.
- 4) Facility of tissue culture is made available to researchers of our colleges as well as teachers of nearby colleges.