

Inorganic Chemistry Laboratory

The Inorganic Chemistry Laboratory trains the students in modern techniques and methodologies in inorganic chemistry. The lab work involves the synthesis, characterization, and manipulation of inorganic compounds, providing practical knowledge that complements classroom learning. Through a carefully designed series of experiments, students develop the skills needed for advanced research and various professional applications in chemistry. Additionally, the lab emphasizes competence in accurate data collection, analysis, and interpretation, which are crucial for an aspiring chemist. Some of the experiments performed in the inorganic laboratory are:

- Volumetric and gravimetric analysis of metal ion mixtures
- Separation of inorganic compounds by chromatography (Column, TLC, Paper)
- Synthesis of coordination compounds
- Preparation of metal-organic frameworks (MOFs)
- Conversion of coordination compounds (*cis-trans*, ligand substitution, redox)
- Spectrophotometric determinations of inorganic compounds
- Analysis of water and soil

The key instruments in the laboratory are:

- UV spectrophotometer
- Melting Point Apparatus
- Flame Photometer
- FT-IR Spectrometer
- Potentiometer
- pH meter
- Conductometer