Estd. 1974

The Oxford College of Science

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Supported by DST GoI under FIST program, Supported by DBT GoI under DBT-STAR College

DBT-STAR Scheme 2025

REPORT

DEPARTMENT: BIOCHEMISTRY:

TITLE	**Rocket Immuno-electrophoresis**
ACTIVITY TYPE	**Additional Practical**
YEAR/SEMESTER	All Biochemistry U G students.
DATE OF EVENT	09/3/2026
VENUE	Biochemistry Lab
ORGANISED BY	Department of Biochemistry
RESOURCE PERSON (with designation and affiliation)	Mr. Bhanu Prakash K S , Assistant Professor, Biochemistry Department, The Oxford College of Science, Arts, Commerce & Management.
FACULTY INCHARGE/EVENT COORDINATOR	Mr. Bhanu Prakash K S, Assistant Professor.
TARGET AUDIENCE	All U G Biochemistry Students
NUMBER OF BENEFICIARIES	19

The objectives of the Program: To teach additional practical to students in Rocket Immuno-electrophoresis.

Highlights of the Program:

- Principle: Rocket Immunoelectrophoresis is based on antigen–antibody interaction where antigen migrates through agarose gel containing specific antibodies under an electric field.
- Gel Preparation: Agarose gel is prepared with a uniform concentration of antibody and poured onto a glass plate to create the electrophoresis medium.
- Sample Loading: Antigen samples and standards are loaded into wells cut in the gel for analysis.
- Electrophoresis Process: When an electric current is applied, antigens migrate through the gel and react with antibodies forming precipitin lines shaped like rockets.
- Quantitative Analysis: The height of the rocket-shaped precipitin peak is directly proportional to the concentration of antigen present in the sample.

The outcome of the program:

- Distinct rocket-shaped precipitin patterns were formed in the agarose gel after electrophoresis.
- The height of each rocket increased with increasing antigen concentration.
- A standard curve was prepared using known antigen concentrations.
- The concentration of unknown antigen samples was determined by comparing their rocket height with the standard curve.
- The experiment demonstrated a simple and reliable quantitative immunological technique for estimating antigen concentration.

Geo-tagged photos with titles

Resource person explaining the procedure to the participants

Students performing OOD

Head of the Department **DBT-STAR Coordinator** **Vice-Principal** **Principal**