# HPTLC - Instrument Demonstration

Experiment 19 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

## Aim

To interpret the supplied hptlc - instrument demonstration.

## Principle

Planar chromatographic separation with controlled application and scanning produces migration and response records.

## Requirements

- Instructor-provided labelled diagrams, traces or data for this activity.
- Calculator, graph paper or spreadsheet, and the activity record.

## Procedure

### 1. Identify equipment

Label application device, plate, chamber and scanner in the demonstration.

### 2. Read conditions

Record plate, mobile phase, development and detection settings.

### 3. Read tracks

Compare standard/test migration, peak pattern and scan response.

### 4. Assess

State identity or quantity evidence only when the assigned method and controls support it.

## Observations and Record

| Record item | Entry |
|---|---|
| Activity / material identifier | _____ |
| Measurement or visible feature | _____ |
| Comparison / calculated outcome | _____ |
| Interpretation and limitation | _____ |

## Worked Example

The numbers below are illustrative; enter your own observations in the record.

- Rf = spot migration / solvent-front migration.
- Example: 30 mm / 60 mm = 0.50.

## Result

The recorded finding is ____; the supporting observation or calculation is ____. The main limitation is ____.

## Precautions

- Use the supplied teaching material; distinguish a measured observation from an assumed value.
- Keep units, axes, labels and measurement conditions consistent.
- Record limitations and seek instructor review before applying a conclusion to a live case.

## Viva Questions and Answers

### 1. What is the main endpoint?

Interpret the supplied hptlc - instrument demonstration.

### 2. Does one observed result prove a general conclusion?

No. Controls, repeatability and the limitations of the method must be considered.

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