

Routes of Drug Administration - Conceptual Study

Experiment 4 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To understand and record the stated experimental-pharmacology concept.

Principle

Administration route affects onset, absorption, systemic availability and local exposure.

Key Points

- Compare oral, intravenous, intramuscular, subcutaneous, topical and inhaled routes.
- Intravenous administration avoids an absorption step; other routes have route-dependent absorption.
- Use diagrams and software; no administration is performed.

Activity Procedure

1. Classify

Group routes as enteral, parenteral or other appropriate categories.

2. Compare

Describe onset, first-pass considerations and local/systemic purpose.

3. Read virtual record

Identify the route label in a supplied simulation.

4. Discuss limits

Explain why the same nominal amount can produce different exposure by different routes.

Record and Observations

Field	Teaching record
Model / instrument / route	_____
Endpoint / units	_____
Relevant control	_____
Interpretation / limitation	_____

Result

The concept was explained and the teaching record completed. Key finding: _____. Limitation: _____.

Viva Questions and Answers

1. What is first-pass metabolism?

Presystemic metabolism that can reduce systemic availability after some routes.

2. Does topical always mean local only?

No; systemic absorption depends on the product and application.

3. Why must the route be recorded?

It is essential to interpret exposure and response.

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