

Experimental Pharmacology Appliances

Experiment 3 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Teaching mode: use approved simulation, prepared demonstration records or supplied experimental data.
No live-animal dosing, surgery or challenge is prescribed in these notes.

Aim

To identify experimental apparatus and calculate a response from a calibrated demonstration.

Principle

A recording system converts a biological response into a measured signal. Calibration, stable baseline and the stated scale are essential to interpreting a trace.

Requirements

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

Procedure

1. Label the apparatus

Identify bath, force transducer or lever, recording system, temperature control and stimulus/event marker in the diagram.

2. Read the calibration

Record the stated conversion from trace height to force or response units.

3. Measure a response

Mark baseline and peak on the supplied trace, subtract baseline and apply calibration.

4. Assess artefacts

Recognise baseline drift, movement artefact and scale changes; retain the raw trace with the calculation.

Observations and Record

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

Pharmacology II

Worked Example

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

- Response = (peak trace reading – baseline reading) × calibration factor.
- Example: a 20 mm change with 0.05 g-equivalent/mm calibration corresponds to 1.0 g-equivalent on that assigned trace.

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?

Identify experimental apparatus and calculate a response from a calibrated 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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