Rat Uterus - Response-trace Interpretation

Experiment 20 - 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 analyse the supplied uterine contraction trace

Principle

Smooth-muscle response depends on tissue state and the defined experimental environment. Baseline and maximum response must be stated.

Requirements

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

Procedure

1. Define the endpoint

Record baseline, amplitude and frequency and its units or scale definition.

2. Read and compare

Use event markers and calibration to compare amplitude and frequency across the supplied trace segments.

3. Present the evidence

Create a labelled table or graph with all supplied groups and time points; preserve replicate values.

4. Assess the conclusion

State the direction/magnitude of the observed change, variation and the limitation of the model.

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.

- Amplitude change = peak − local baseline.
- Example: a calibrated peak of 6 units and baseline of 2 units gives an amplitude of 4 units.

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 measured endpoint?

Baseline, amplitude and frequency.

2. What prevents an overstatement?

Use the defined model, valid controls, variation and known confounders; do not generalise beyond the supplied evidence.

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