

Central Activity by Actophotometer - Simulation

Experiment 14 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To compare virtual locomotor activity counts.

Principle

An actophotometer records activity-related detections. A depressant example reduces counts, whereas stimulant effects and contextual factors can increase them.

Hypothetical Dataset

These original figures illustrate analysis only. They are not live observations or dosing instructions.

Virtual record	Counts
Control	240
Treatment	120

Requirements

- Institution-approved pharmacology simulation such as ExPharm
- Predefined virtual control and treatment records
- Worksheet or spreadsheet for graphing and calculation

Procedure

1. Open the exercise

Select the named virtual model and read its endpoint and default settings.

2. Review controls

Record the baseline, vehicle/control and comparator entries supplied by the software.

3. Run the simulation

Use the instructor-assigned virtual treatment option; record the output and units.

4. Compare

Compare the defined endpoint between control and treatment; repeat a virtual run only if the exercise requires it.

5. Analyse

Use the supplied calculation or response trend and state possible confounders.

6. Record

Save the virtual results and write an interpretation that identifies them as simulated.

Interpretation Guide

The interval must be identical for comparison. Counts are instrument-defined activity signals, not a direct measure of mood or consciousness.

Observations and Record

Group / run	Endpoint: Activity counts / defined interval	Student record
Control	Control interval	_____
Treatment	Assigned CNS-active drug	_____
Software / setting	Assigned virtual exercise	_____

Worked Example

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

- Reduction (%) = $(240 - 120) / 240 \times 100 = 50\%$.

Result

In the software exercise, _____ changed from _____ to _____. The result _____ supports the stated model effect. Confounders/limits: _____.

Precautions

- Use software only; no live animal, tissue collection or drug administration is performed.
- Do not alter safety or validity settings to make a desired result.
- A virtual output demonstrates the model's programmed response and is not a patient treatment recommendation.

Viva Questions and Answers

1. Why match observation intervals?

A longer interval can produce more counts without a stronger drug effect.

2. What may confound activity?

Sedation, motor impairment, novelty and the model settings.

3. Why identify the data as simulated?

It prevents a programmed result from being represented as a real experimental observation.

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