Assays of Assigned Pharmaceutical Drugs

Experiment 1 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To assay the allocated medicinal substances using the prescribed analytical methods.

Principle

An assay reports content on a specified chemical and dosage-form basis. Method selection, standard identity, stoichiometry and interference control determine the validity of the result.

Requirements

- Assigned drug substances and monographs, reference standards or standardised titrants, prescribed reagents and calibrated equipment.

Procedure

1. Plan each assay

Enter drug identity, chemical form, test portion, method version and specification.

2. Prepare the test and standard

Use the method-specific preparation, record dilution and account for anhydrous/dried or salt basis if required.

3. Measure

Obtain the prescribed endpoint or instrumental signal with blank and control results.

4. Calculate content

Use the monograph factor or validated calibration, including all dilution and chemical-form corrections.

5. Report

Compare replicates and the assigned acceptance requirement; state content, units and basis.

Observations and Record

Drug / form	Method / endpoint	Content and basis
Assigned drug 1	_____	_____
Assigned drug 2	_____	_____
Assigned drug 3	_____	_____

Worked Example

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

- Content (%) = determined analyte mass / test-portion mass × 100, if both are expressed on the same basis.
- Example: 0.198 g determined in a 0.200 g portion gives 99.0% on that stated basis.

Result

Record the completed observations, calculations and conclusion with units. State any limitation of the observation.

Precautions

- Do not substitute one drug salt, hydrate or method factor for another.
- An illustrative numerical example does not set the official specification.

Viva Questions and Answers

1. Why state the chemical form?

Salt and hydration state change formula mass and the content basis.

2. What does a blank correct?

Response not attributable to the analyte in the stated measurement system.

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