Identification Tests for Inorganic Pharmaceuticals

Experiment 4 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To record characteristic identity evidence for the assigned substances.

Principle

An identification test establishes a specified ion or chemical property. It does not by itself establish purity or assay content.

Requirements

- Assigned sodium bicarbonate, barium sulphate, ferrous sulphate and potassium chloride.
- Instructor-approved identity reagents, controls and clean glassware.

Procedure

1. Record the substance

Enter name, hydration state where relevant and appearance; select at least the required three identity exercises.

2. Sodium bicarbonate

Use the assigned sodium and bicarbonate identity tests; record the acid-response evidence from the authorised small-scale method.

3. Barium sulphate

Use the prescribed monograph treatment and barium/sulphate identity evidence; its low solubility must be considered.

4. Ferrous sulphate

Record the assigned ferrous-ion and sulphate tests and distinguish oxidation-related changes.

5. Potassium chloride

Record independent potassium and chloride evidence; use a comparison or blank where required.

Observations and Record

Substance	Cation evidence	Anion evidence
Sodium bicarbonate	_____	_____
Barium sulphate	_____	_____
Ferrous sulphate	_____	_____
Potassium chloride	_____	_____

Result

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

Precautions

- A substance name must not be copied as the result without recorded evidence.
- Use controls and avoid contamination between ion tests.

Viva Questions and Answers

1. Does an identity test measure content?

Usually not; identification and quantitative assay address different questions.

2. Why test both ions?

Either ion alone may occur in other salts.

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