

Normal Constituents of Urine

Experiment 1 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To recognise the assigned urinary constituents by qualitative tests.

Principle

Normal urine contains water and excreted solutes such as urea, creatinine and electrolytes. Qualitative reactions identify a constituent but do not measure its daily excretion.

Requirements

- Instructor-provided artificial urine or approved teaching material, prescribed test reagents and controls.
- Labelled test tubes, appropriate heating equipment where specified, and record.

Procedure

1. Plan the panel

List the tests for urea, creatinine and chloride. Write the reagent, endpoint and control for each before starting.

2. Compare test and control

Apply the prescribed teaching method to the coded material and matching control. Observe only at the stated read stage.

3. Record separately

Record the assigned colour reaction or precipitate, and its reagent-control comparison. Use positive, negative or uninterpretable for the test, not a disease label.

Medicinal Biochemistry

4. Discuss the finding

Explain what the test establishes, whether the control is valid and what additional measurement would be needed.

Observations and Record

Constituent / test	Observed endpoint	Control and conclusion
Test 1	_____	_____
Test 2	_____	_____
Test 3	_____	_____

Result

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

Precautions

- Use labelled teaching material and the approved disposal route.
- Observe the specified endpoint; delayed readings or interfering material can change interpretation.
- Do not equate a qualitative positive with concentration or a clinical diagnosis.

Viva Questions and Answers**1. Can a qualitative reaction give an exact concentration?**

No. It indicates the tested property under the method conditions.

2. Why use a control?

It establishes that the expected reagent behaviour and background are known.

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