

Xanthoproteic Test for Aromatic Amino Acids

Experiment 6 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To perform or observe the assigned qualitative test and interpret its controls.

Principle

The assigned reaction produces yellow nitro derivatives from suitable aromatic residues; the controlled alkaline stage can deepen the colour.

Expected Teaching Response

Yellow, with orange after the assigned alkaline stage, supports a responsive aromatic group.

Requirements

- Instructor-prepared protein/amino-acid solutions and approved reagent system
- Clean labelled tubes or product-specific test equipment; PPE

Procedure

1. Label

Prepare separate test, positive control and reagent blank/negative control entries.

2. Perform

Observe the instructor-controlled reaction and subsequent prescribed colour-development stage; record the response without preparing reagents.

3. Read

Observe at the method-defined time and compare with controls.

4. Record

Write the actual colour, precipitate or category, then the supported inference.

5. Interpret

Not every amino acid gives the same reaction; the test is not a complete protein assay.

Biochemistry and Clinical Pathology

Observations and Record

Material	Observed response	Inference
Test material	_____	_____
Positive control	_____	_____
Blank / negative control	_____	_____

Result

The observed response was _____. Controls were _____. The result _____ supports _____ under the stated method.

Precautions

- Use simulated biological material or authorised supervised demonstrations.
- Follow reagent, solvent, heating and waste controls; corrosive or metal reagents are instructor-managed.
- Do not copy an expected response into the actual observation field.

Viva Questions and Answers**1. What response is expected in the teaching positive?**

Yellow, with orange after the assigned alkaline stage, supports a responsive aromatic group.

2. Why use controls?

They show whether the reagents and conditions produced a valid comparison.

3. What limits the conclusion?

Not every amino acid gives the same reaction; the test is not a complete protein assay.

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