

Picric Acid - Reaction Concept and Hazard Assessment

Experiment 12 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To explain the product class, recognise energetic-material hazards and complete a conceptual preparation record.

Principle

The syllabus lists this preparation. Picric acid is an energetic nitroaromatic compound; this chapter is a conceptual reaction and hazard-assessment exercise, with no synthesis procedure.

Requirements

- Instructor-provided labelled diagrams, traces or data for this activity.
- Calculator, graph paper or spreadsheet, and the activity record.

Procedure

1. Identify the product

Draw the supplied product structure and identify its phenolic and nitro functional groups.

2. Discuss reaction classification

Classify the transformation from the instructor-provided reaction overview without planning quantities, addition conditions or a preparative route.

3. Assess hazards

Explain why drying, unsuitable storage and contact with incompatible materials require specialist control. Do not prepare or handle the substance for this exercise.

4. Compare evidence

Review supplied identity data and distinguish product identity from purity and yield.

5. Record the conclusion

Enter a conceptual scheme classification, assigned identity evidence and the reason for using a non-preparative exercise.

Pharmaceutical Organic Chemistry

Observations and Record

Record item	Entry
Activity / material identifier	_____
Measurement or visible feature	_____
Comparison / calculated outcome	_____
Interpretation and limitation	_____

Result

The recorded finding is ____; the supporting observation or calculation is _____. The main limitation is _____.

Precautions

- Use the supplied teaching material; distinguish a measured observation from an assumed value.
- Keep units, axes, labels and measurement conditions consistent.
- Record limitations and seek instructor review before applying a conclusion to a live case.

Viva Questions and Answers**1. Why is no synthesis performed?**

The preparation concerns an energetic material and is covered through a conceptual exercise.

2. What does the structure show?

A phenolic aromatic ring bearing nitro groups; the assigned identity must be confirmed using suitable evidence.

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