

2025 H2 Chemistry Preliminary Exam Paper 4 Preparation Instructions

Apparatus

2 × burettes and clips 1 × 10 cm ³ pipette 1 × 25 cm ³ pipette 1 × pipette filler 1 × retort stand and clamp 2 × filter funnel 1 × white tile 2 × 250 cm ³ conical flasks 1 × 100 cm ³ volumetric flask 1 × 25 cm ³ measuring cylinder 1 × test-tube rack 8 × test-tubes 1 × test-tube holder 1 × marker	2 × 250 cm ³ beaker 2 × Styrofoam cup 1 × thermometer 1 × bunsen burner 1 × lighter 1 × wash bottle containing deionised water 1 × pair of safety goggles 1 × waste bottle (communal) hot water pot (communal) A clear plastic bag containing: <ul style="list-style-type: none">• 8 teat pipettes• 1 × wooden splint• 3 × paper towels• 2 × blue litmus paper• 2 × red litmus paper
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Chemicals

FA reagents (1 set for every candidate)

Label	per candidate	identity
FA 1	100 cm ³	Hydrochloric acid (HCl), 1.80 mol dm ⁻³
FA 2	50 cm ³	Sodium hydroxide (NaOH), 1.50 mol dm ⁻³
FA 3	90 - 100 cm ³	0.10 mol dm ⁻³ NaCl/ Dissolve 5.85g of NaCl in each dm ³ of solution
FA 4	130 cm ³	0.05 mol dm ⁻³ iodine in aqueous potassium iodide Dissolve 12.69 of iodine with 40 g of KI in 1 dm ³ of solution
FA 5	150 cm ³	0.100 mol dm ⁻³ sodium thiosulfate Dissolve 24.82g of Na ₂ S ₂ O ₃ ·5H ₂ O or 15.82g of Na ₂ S ₂ O ₃ in each dm ³ of solution.
FA 7	10 cm ³	Propanone
FA 8	10 cm ³	Glucose (in replacement of propanal)
FA 9	10 cm ³	Propan-2-ol
FA 10	10 cm ³	ethanoic acid (in replacement of Propanoic acid)

*Note to invigilator: No FA 6 is provided. Please ask the student to read the question carefully.

Label	per candidate	identity
Solution S	10 cm ³	Starch solution
Fehling's solution	5-10 cm ³	Fehling's solution
2,4-DNPH	5-10 cm ³	2,4-DNPH
sodium carbonate	5-10 cm ³	sodium carbonate

Bench reagents
NaOH
Limewater