

SH2 2025**Chemical List for SH2 Preliminary Practical Exam****Term 3 Week 10 (1st Sept 2025)**

Chemicals:	FA 1 is 1.0 mol dm ⁻³ sulfuric acid, H ₂ SO ₄ FA 2 is 1.3 mol dm ⁻³ sodium hydroxide, NaOH FA 3 is 0.552 mol dm ⁻³ aqueous copper(II) sulfate, CuSO ₄ (aq) FA 4 is 0.100 mol dm ⁻³ sodium thiosulfate, Na ₂ S ₂ O ₃ FA 5 is a 10% solution of potassium iodide, KI. Starch indicator FA 7 is aqueous ammonium iodide, NH ₄ I/ FA 8 is aqueous zinc sulfate, ZnSO ₄ FA 9 is aqueous sodium nitrate, NaNO ₃
Apparatus:	1 x Styrofoam cup 1 x 250 cm ³ beaker 2 x 50 cm ³ measuring cylinder (1 of them labelled FA 2) 1 x 0.2 °C thermometer 2 x 50 cm ³ burette 1 x retort stand with clamp 2 x filter funnel 1 x 25.0 cm ³ pipette and pipette filler 2 x 250 cm ³ conical flasks 1 x 10 cm ³ measuring cylinder 1 x 250 cm ³ graduated flask 6 x dropper 1 x white tile 2 x boiling tube 6 x test-tube Paper towel Wash bottle containing deionised water

Name	Chemical	Quantity per student	Total Quantity	Remarks
FA 1	1.0 mol dm ⁻³ sulfuric acid, H ₂ SO ₄	220 cm ³	220 cm ³ x 390 students ≈	
FA 2	1.3 mol dm ⁻³ sodium hydroxide, NaOH	250 cm ³	250 cm ³ x 390 students ≈	
FA 3	aqueous copper(II) sulfate, CuSO ₄ (aq) containing 138.0 g dm ⁻³ of hydrated copper(II) sulfate, CuSO ₄ .5H ₂ O	100 cm ³	100 cm ³ x 390 students ≈	M _r of CuSO ₄ .5H ₂ O = 249.6 [CuSO ₄ .5H ₂ O] = 0.552 mol dm ⁻³ Dissolve 138.0 g in 1 dm ³ deionised water.

FA 4	0.100 mol dm ⁻³ sodium thiosulfate, Na ₂ S ₂ O ₃ , containing 15.81 g dm ⁻³ of anhydrous sodium thiosulfate *If only hydrated sodium thiosulfate, Na ₂ S ₂ O ₃ .5H ₂ O, is avail, the appropriate mass to prepare 0.100 mol dm ⁻³ solution should be used.	150 cm ³	150 cm ³ x 390 students ≈ L	If using anhydrous Na ₂ S ₂ O ₃ : M _r of Na ₂ S ₂ O ₃ = 158.2 To prep 0.100 mol dm ⁻³ solution, dissolve 15.82 g in 1 dm ³ deionised water. If using hydrated Na ₂ S ₂ O ₃ .5H ₂ O: M _r of Na ₂ S ₂ O ₃ .5H ₂ O = 248.2 To prep 0.100 mol dm ⁻³ solution, dissolve 24.82 g in 1 dm ³ deionised water.
FA 5	10% solution of potassium iodide, KI, containing 100.0 g dm ⁻³ of potassium iodide *Solution should be freshly prepared using fresh KI(s)	60 cm ³	60 cm ³ x 390 students ≈ L	Dissolve 100.0 g in 1 dm ³ deionised water.
	Starch indicator containing 4 g dm ⁻³ of soluble starch	5 cm ³	5 cm ³ x 390 students ≈ L	
FA 7	Aqueous ammonium chloride, NH ₄ Cl	10 cm ³		NH ₄ ⁺ , Cl ⁻
FA 8	Aqueous zinc sulphate, ZnSO ₄	10 cm ³		Zn ²⁺ , SO ₄ ²⁻
FA 9	Aqueous sodium nitrate, NaNO ₃	10 cm ³		Na ⁺ , NO ₃ ⁻

Bench reagents:

NH ₃ (aq)	NaOH (aq)	Red litmus paper	Wooden splint
H ₂ SO ₄ (aq)	Ca(OH) ₂ (aq)	KMnO ₄ (aq)	Lighter
HNO ₃ (aq)	AgNO ₃ (aq)	Aluminium foil	