



LabSkills activity	IB specification
<b>Techniques</b>	
Reflux	Topic 10: Organic chemistry
Recrystallisation	Topic 10: Organic chemistry
Filtration	Topic 10: Organic chemistry
Distillation	Topic 10: Organic chemistry
Solvent extraction	Topic 10: Organic chemistry
Melting point	3.2 Physical properties
	4.3 Intermolecular forces
	4.5 Physical properties
Thin layer chromatography	A7 Chromatography
Titration	Unit 8: Acids and bases
	Unit 9: Oxidation and reduction
Titration curves	8.1 Theories of acids and bases
	8.2 Properties of acids and bases
	8.3 Strong and weak acids and bases
	8.4 The pH scale
	18.4 Acid-base titrations
Collection of a gas	1.4 Mass and gaseous volume relationships in chemical reactions
Enthalpy change of neutralisation	5.1 Exothermic and endothermic reactions
	5.2 Calculation of enthalpy changes
Enthalpy change of combustion	5.1 Exothermic and endothermic reactions
	5.2 Calculation of enthalpy changes
	B1 Energy
Colorimetry	A8 Visible and ultraviolet (UV-vis) spectroscopy
Electrochemical cells	9.2 Redox equations
	9.3 Reactivity
	9.4 Voltaic cells
	9.5 Electrolytic cells
	19.1 Standard electrode potentials
	C5 Fuel cells and rechargeable batteries
Tests for inorganic compounds	3.2 Physical properties
	3.3 Chemical properties
	9.3 Reactivity
	13.1 Trends across period 3
Tests for organic compounds	Unit 10: Organic chemistry
	Unit 20: Organic chemistry
	Option G: Further organic chemistry
Transition metals	4.1 Ionic bonding
	13.2 First-row d-block elements
Mass spectrometry	2.2 The mass spectrometer
	A4 Mass spectrometry
IR spectroscopy	2.3 Electron arrangement
	A3 Infrared (IR) spectroscopy
NMR spectroscopy	A5 Nuclear magnetic resonance (NMR) spectroscopy
	A9 Nuclear magnetic resonance (NMR) spectroscopy
GC analysis	A10 Chromatography
HPLC analysis	A10 Chromatography
	5.4 Organic chemistry - arenes, nitrogen compounds and synthesis

Stoichiometry and yield	1.2 Formulas
	1.3 Chemical equations
	1.4 Mass and gaseous volume relationships in chemical reactions
	4.1 Ionic bonding
	4.2 Covalent bonding
Quantities and concentration	1.1 The mole concept and Avogadro's constant
	1.4 Mass and gaseous volume relationships in chemical reactions
	1.5 Solutions
	2.1 The atom
Errors and significant figures	All units
	11.1 Uncertainty and error in measurement
	11.2 Uncertainties in calculated results
Reaction rates	6.1 Rates of reaction
	6.2 Collision theory
	16.1 Rate expression
	16.2 Reaction mechanism
	16.3 Activation energy
Equilibrium constants	7.2 The position of equilibrium
	17.2 The equilibrium law
Weights and measures	All units
Preparing solutions	1.5 Solutions
Heating	All units

## Experiments

Oxidation of alcohols	10.4 Alcohols
Enthalpy change of neutralisation	5.1 Exothermic and endothermic reactions
	5.2 Calculation of enthalpy changes
	15.1 Standard enthalpy changes of reaction
Enthalpy change of combustion	5.1 Exothermic and endothermic reactions
	5.2 Calculation of enthalpy changes
	15.1 Standard enthalpy changes of reaction
	B1 Energy
Preparation of an alkene	G3 Elimination reactions
Preparation of an organic acid	10.4 Alcohols
Preparation of a halogenoalkane	10.2 Alkanes
Acid/base titration	Topic 8: Acids and bases
	13.2 First-row d-block elements
RMM of volatile liquid	1.4 Mass and gaseous volume relationships in chemical reactions
Iodine/thiosulfate titration	Topic 9: Oxidation and reduction
Identification of an unknown	3.2 Physical properties
	3.3 Chemical properties
	4.3 Intermolecular forces
	9.3 Reactivity
	Unit 10: Organic chemistry
	13.2 First-row d-block elements
	Unit 20: Organic chemistry
	Option G Further organic chemistry
Enthalpy of hydration (Hess' law)	5.3 Hess's law
Multi-stage synthesis - aspirin	Unit 10: Organic chemistry
	Unit 20: Organic chemistry
Preparation of an ester	20.4 Condensation reactions
	G9 Addition-elimination reactions
Hydrolysis of an ester	
Nitration of an aromatic	G10 Electronic substitution reactions

Preparation of chrome alum	13.2 First-row d-block elements
Iron(II)/permanganate titration	Topic 9: Oxidation and reduction
Reaction of iodine and propanone	16.1 Rate expression
	16.2 Reaction mechanism
Iodine clock	16.1 Rate expression
	16.2 Reaction mechanism
Investigating reaction equilibria	7.1 The position of equilibrium
	17.2 The equilibrium law

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