

Topic 2.1: Volumetric Analysis

<p>Expectation From SACE Subject Outline <i>Note: these can be asked in converse</i></p>	<p>Summary of things I know about this (include tricks for memorising things, etc.)</p>	<p>Example question(s) to practice until I can do under test conditions without help There are likely to be some in the textbook too; also take note of questions you'd like examples of from the teacher</p>
<p>Convert concentrations from one unit to another (e.g mol L⁻¹, g L⁻¹, %w/v, ppm, and ppb).</p>		<p>Assignment 1 Test 1 Q1(b), 2(f) Test 2 Q1(g)</p>
<p>Perform stoichiometric calculations when given the reaction equation and the necessary data.</p>		<p>Assignment 2 Q4, 5 Test 2 Q1(a-e)</p>
<p>Describe the correct use of a volumetric flask, a pipette, and a burette.</p>		<p>Assignment 2 Q1(a) Test 1 Q2(b)</p>
<p>Describe and explain the procedure involved in carrying out a titration, particularly rinsing glassware and determining the end-point.</p>		<p>Assignment 2 Q1(c), Q3(b) Test 1 Q2(c-d)</p>
<p>Determine the concentration of a solution of a reactant in a chemical reaction by using the results of a titration.</p>		<p>Assignment 2 Q1(d-e), Q2(b)(i), Q3(d-e) Test 1 Q2(e) Test 2 Q1(f)</p>

Topic 2.2: Chromatography

<i>Expectation</i>	<i>Summary of things I know about this</i>	<i>Example question(s) to practice</i>
Identify the stationary and mobile phases in an adsorption chromatography process.		
Predict the relative strengths of attraction of components for the stationary phase and the mobile phase on the basis of their polarities.		Assignment Q1(e)
Predict the relative rates of movement of components along a stationary phase, given the structural formulae or relative polarities of the components and the two phases.		Assignment Q1(e) Test 1 Q3(b), 4(b) Test 2 Q2(b)
Describe and apply R_F values and retention times in the identification of components in a mixture.		Assignment Q3 Test 1 Q3(a), 4(a) Test 2 Q2(a)

Topic 2.3: Atomic Spectroscopy

<i>Expectation</i>	<i>Summary of things I know about this</i>	<i>Example question(s) to practice</i>
State the effect of the absorption or emission of radiation on the energy levels of electrons in atoms or ions.		Assignment Q1(b)
State that the wavelengths of radiation emitted and absorbed by an element are unique to that element.		Assignment Q1(c)
Explain the principles of atomic absorption spectroscopy in identifying elements in a sample.		Assignment Q1(a) Test 1 Q5(a) Test 2 Q4(a)
Describe the construction and use of calibration graphs in determining the concentration of an element in a sample.		Assignment Q2(b) Test 1 Q5(b) Test 2 Q4(c)