

Question Number	Answer	Acceptable answers	Mark
<b>1(a)(i)</b>	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	capital letters; numbers must be subscripts ignore structural formulae such as CH <sub>3</sub> COOCH <sub>2</sub> CH <sub>3</sub> i.e. must have just C <sub>4</sub> , H <sub>8</sub> and O <sub>2</sub> in any order.	<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>1(a)(ii)</b>	ethanol + ethanoic acid → ethyl ethanoate + water (2) LHS= 1 mark [allow acetic acid]; RHS= 1 mark [allow ethyl acetate] Allow = for arrow. Fully correct formula equation = 2 (part mark not possible with formulae)		<b>(2)</b>

Question Number	Answer	Acceptable answers	Mark
<b>1(a)(iii)</b>	no vapour/ little vapour (given off) / it is not a gas / it is a solid (not vapour) OR small amount/ concentration in sweets	allow gas for vapour allow ethyl ethanoate is in a liquid state	<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>1(b)(i)</b>	<b>D</b> soap		<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>1(b)(ii)</b>	A description linking <ul style="list-style-type: none"> <li>filter / decant off water (1)</li> <li>(then) wash/rinse (1)</li> </ul> Can only score second mark if first marking point awarded	ignore anything before filtering that would not contaminate soap but do not allow to evaporate water/ heat BEFORE filtering ignore anything after washing, including drying	<b>(2)</b>

Question Number	Answer	Acceptable answers	Mark
<b>1(c)</b>	<b>C</b> unsaturated molecules in the liquid oil become saturated		<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(a)(i)</b>	electrons		<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(a)(ii)</b>	transition (metals/ elements)	transitional ignore transient	<b>(1)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(b)</b>	An explanation linking the following points <ul style="list-style-type: none"> <li>hydrogen chloride {soluble/dissolves} (in water) (1)</li> <li>forms hydrochloric acid (1)</li> </ul>	hydrogen chloride reacts with water	<b>(2)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(c)</b>	An explanation including <b>two</b> of the following points <ul style="list-style-type: none"> <li>(orange) colour due to bromine (1)</li> <li>chlorine displaces bromine (1)</li> <li>(because) chlorine is more reactive (than bromine) (1)</li> </ul>	chlorine displaces bromide (ions) a displacement reaction (occurs)OWTE	<b>(2)</b>

Question Number	Answer	Acceptable answers	Mark
<b>2(d)</b>	A description including <b>three</b> of the following points <ul style="list-style-type: none"> <li>mix solutions (1)</li> <li>filter (1)</li> <li>wash (precipitate / solid) with water (1)</li> <li>dry (precipitate / solid) in oven /leave to dry(1)</li> </ul>	pour (both) solutions into { beaker/other suitable container} ignore addition of hydrochloric acid  if wrong things mixed allow max 2 from last three points	<b>(3)</b>