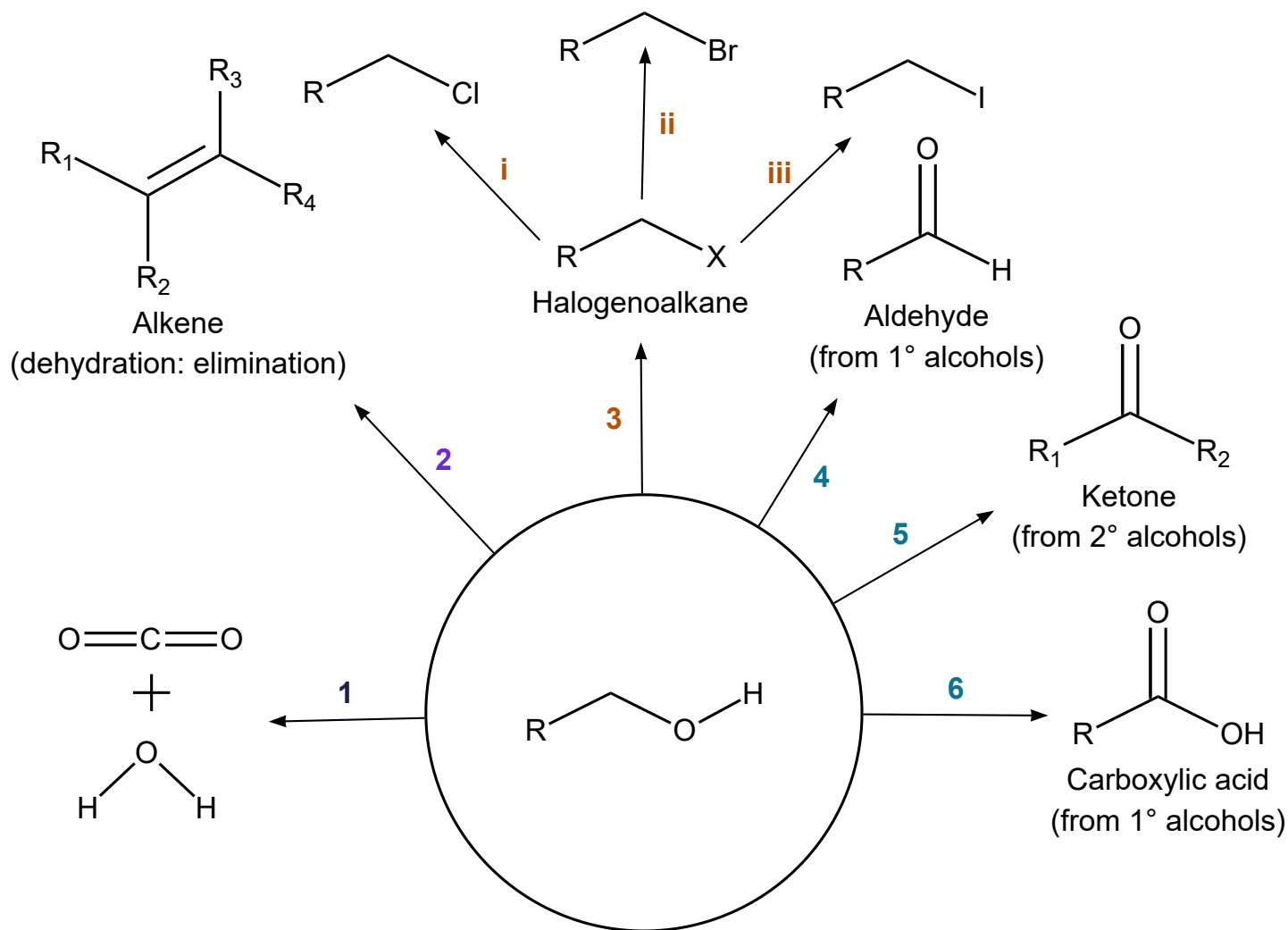


Alcohols Map

Edexcel A Level Chemistry · Topic 6E Alcohols



1 combustion: excess O₂(g), burns with a clean blue flame → CO₂ + H₂O

2 dehydration (elimination): conc. H₃PO₄ (or conc. H₂SO₄), heat

3 substitution:

i) PCl₅, room temperature (misty fumes of HCl) or HCl

ii) KBr and conc. (50%) H₂SO₄, warm

iii) PCl₃ (red P, I₂), warm

4 oxidation: [O]; K₂Cr₂O₇ and dil. H₂SO₄, warm and distil off the aldehyde immediately; orange → green

5 oxidation: [O]; K₂Cr₂O₇ and dil. H₂SO₄, heat under reflux; orange → green

6 oxidation: [O]; excess K₂Cr₂O₇ and dil. H₂SO₄, heat under reflux; orange → green

Tertiary alcohols are not oxidised: the dichromate stays orange.

Tests: aldehyde: Benedict's or Fehling's solution turns brick red; carboxylic acid: fizzes with Na₂CO₃ or NaHCO₃.

combustion dehydration (elimination) substitution oxidation

