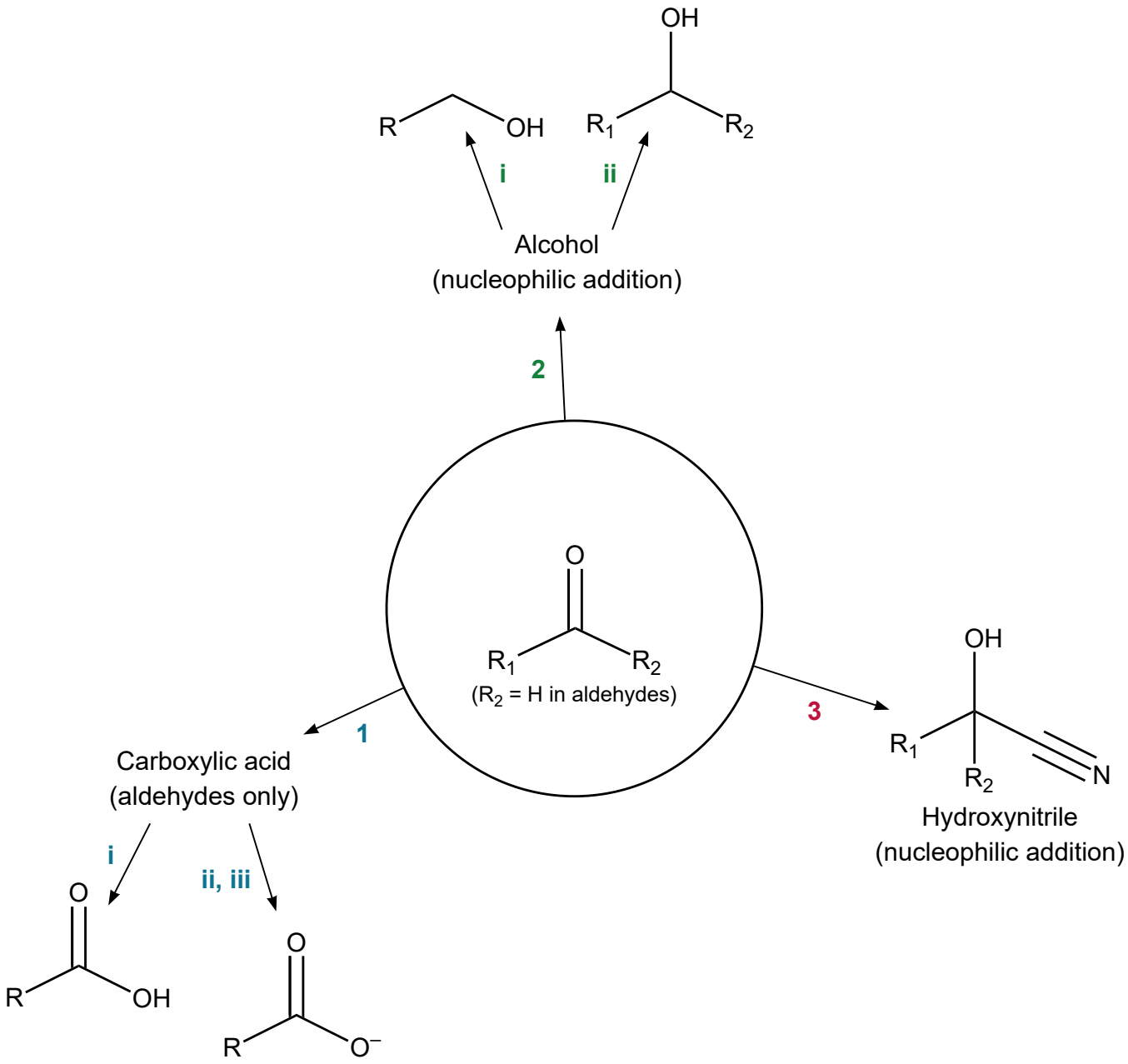
Aldehydes and Ketones Map

AQA A Level Chemistry · 3.3.8 Aldehydes and ketones



1 oxidation: [O]
i acidified $K_2Cr_2O_7$, heat under reflux; orange → green → carboxylic acid
ii Tollens' reagent, warm; silver mirror → carboxylate
iii Fehling's solution, warm; blue → red precipitate → carboxylate

2 reduction: [H]; $NaBH_4$ in aqueous solution, room temperature

3 addition: KCN, then dilute acid, room temperature; racemic mixture forms

KCN is very toxic: use it in a fume cupboard; HCN gas must not escape.
Attack from either side of the planar C=O gives a racemic mixture of hydroxynitriles.

oxidation reduction addition

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