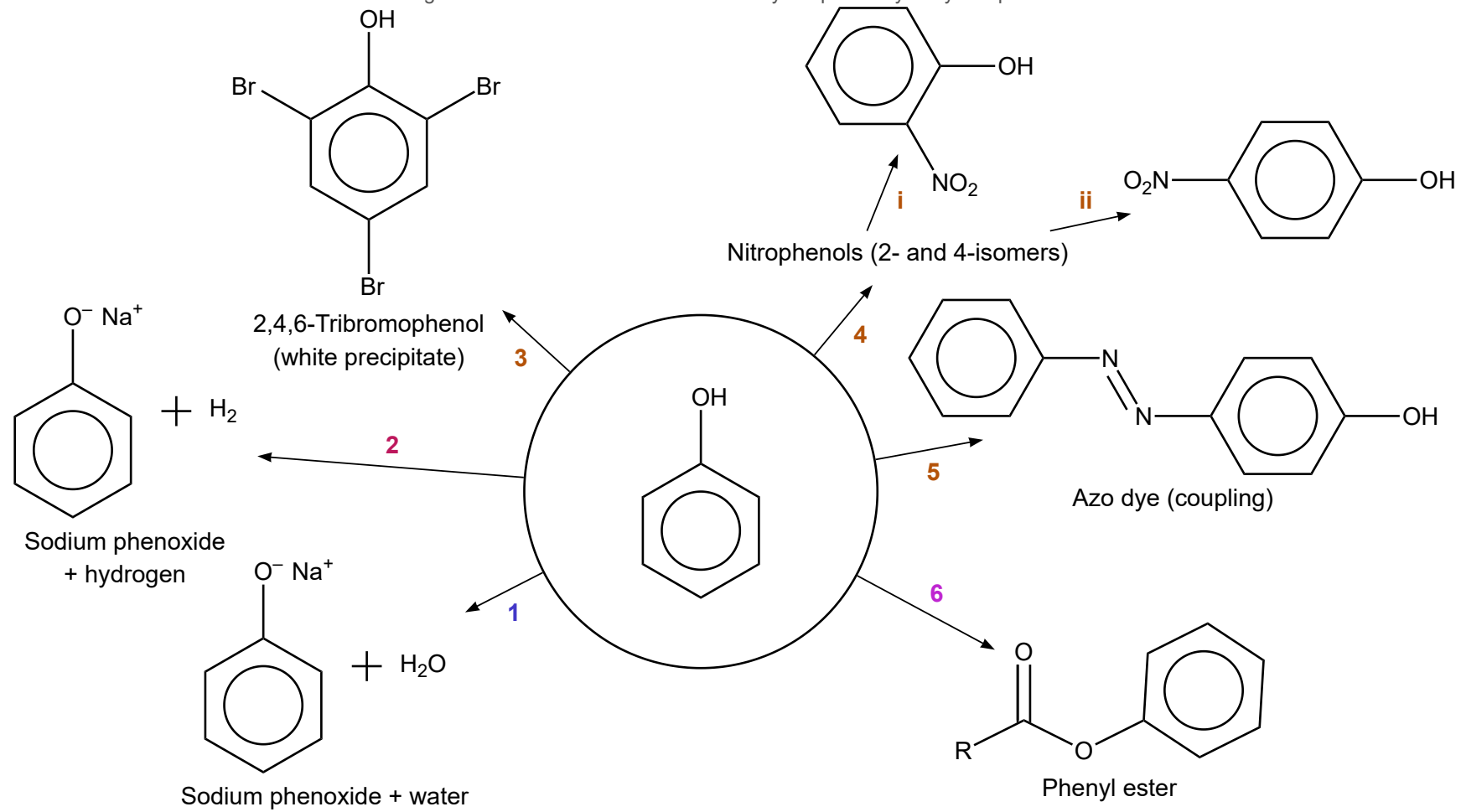
Phenol Map

Cambridge International AS & A Level Chemistry · Topic 32 Hydroxy compounds



1 **acid-base**: NaOH(aq), room temperature

2 **redox**: Na(s), room temperature; effervescence

3 **substitution (electrophilic)**: Br_2(aq), room temperature

4 **substitution (electrophilic)**: dilute HNO_3(aq), room temperature
i 2-nitrophenol
ii 4-nitrophenol

5 **substitution (coupling)**: benzenediazonium chloride, in NaOH(aq), below 10 °C

6 **addition-elimination**: acyl chloride, RCOCl, room temperature

Acidity: phenol > water > ethanol (phenoxide charge delocalised into the ring).
Made from phenylamine: $NaNO_2$ + dilute acid below 10 °C, then warm the diazonium salt with water.

acid-base redox substitution addition-elimination

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