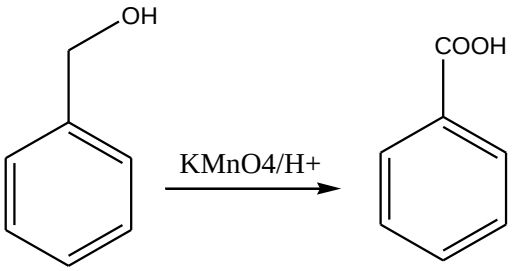
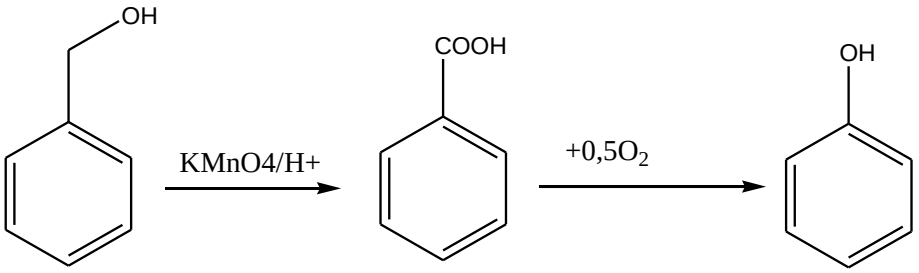
Benzyl alcohol is refluxed with potassium permanganate or other oxidizing reagents in water. The mixture is hot filtered to remove manganese dioxide and then allowed to cool to afford benzoic acid.




Benzoic acid is mainly consumed in the production of phenol by oxidative decarboxylation at 300−400 °C:




The temperature required can be lowered to 200 °C by the addition of catalytic amounts of copper(II) salts. The phenol can be converted to cyclohexanol, which is a starting material for nylon synthesis.