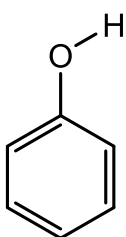
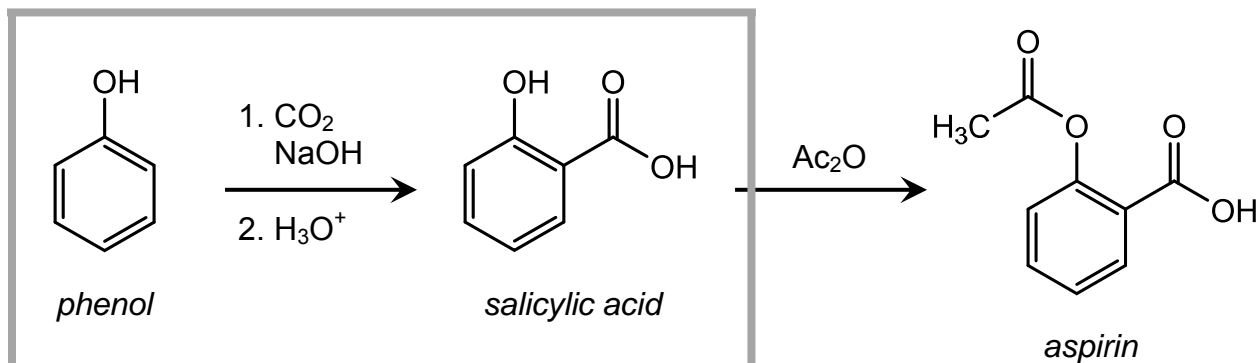


Workshop 6
Electrophilic Aromatic Substitution in Aspirin Manufacture

Aspirin is commercially manufactured today in much the same way as it was 150 years ago—by electrophilic aromatic substitution of phenol to salicylic acid, followed by esterification to acetyl salicylate (aspirin).



Draw a mechanism that explains the formation of salicylic acid from phenol. CO₂ is not a strong enough electrophile to react with aromatic donors, but deprotonation of phenol (pK_a = 10) to phenoxide makes the pair of molecules react.