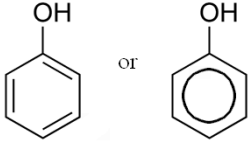


	Primary alcohol	secondary alcohol	tertiary alcohol	phenol
<b>Name</b>	Ethyl alcohol	iso-Propyl alcohol	tert-Butyl alcohol	
<b>Mol. Formula.</b>	C <sub>2</sub> H <sub>6</sub> O	C <sub>3</sub> H <sub>8</sub> O	C <sub>4</sub> H <sub>10</sub> O	C <sub>6</sub> H <sub>6</sub> O
<b>Mol. Structure.</b>	$  \begin{array}{c}  \text{H} \quad \text{H} \\    \quad   \\  \text{H}-\text{C}-\text{C}-\text{O}-\text{H} \\    \quad   \\  \text{H} \quad \text{H}  \end{array}  $	$  \begin{array}{c}  \text{OH} \\    \\  \text{H}_3\text{C}-\text{C}-\text{CH}_3  \end{array}  $	$  \begin{array}{c}  \text{CH}_3 \\    \\  \text{H}_3\text{C}-\text{C}-\text{OH} \\    \\  \text{CH}_3  \end{array}  $	
<b>Physical state</b>	Colorless- Liquid	Colorless - Liquid	Colorless - Liquid	White-solid
	soluble (miscible) in water	soluble (miscible) in water	soluble (miscible) in water	insoluble (immiscible) in water
<b>Lucas test</b>	<i>Slow reaction</i>	<i>+Ve result</i> after heat <b>(cloudy solution)</b>	<i>+Ve result</i> fast reaction <b>(cloudy solution)</b>	-----
<b>Oxidation (KMnO<sub>4</sub>)</b>	<i>+Ve result</i> disappearance of the purple color of KMnO <sub>4</sub> appearance of a brown precipitate	<i>+Ve result</i> disappearance of the purple color of KMnO <sub>4</sub> appearance of a brown precipitate	<i>-Ve result</i>	-----
<b>Acidity of Phenol</b>	<b>bromothymol blue</b>	-----	-----	Yellow- orange solution pH ≈6.2
	<b>bromophenol blue</b>	-----	-----	Blue solution pH ≈4.6
<b>Br<sub>2</sub> /H<sub>2</sub>O</b>	-----	-----	-----	<i>+Ve result</i> dissipation of the brown color of the bromine Appearance of white emulsion
<b>FeCl<sub>3</sub></b>	-----	-----	-----	<i>+Ve result</i> Appearance of purple color