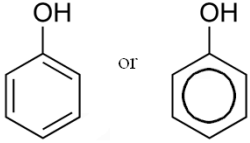


		Primary alcohol	secondary alcohol	tertiary alcohol	phenol
Name		Ethyl alcohol	iso-Propyl alcohol	tert-Butyl alcohol	
Mol. Formula.		C ₂ H ₆ O	C ₃ H ₈ O	C ₄ H ₁₀ O	C ₆ H ₆ O
Mol. Structure.		$ \begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{H}-\text{C}-\text{C}-\text{O}-\text{H} \\ \quad \\ \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} $	
Physical state		Colorless- Liquid	Colorless - Liquid	Colorless - Liquid	White-solid
		soluble (miscible) in water	soluble (miscible) in water	soluble (miscible) in water	insoluble (immiscible) in water
Lucas test		<i>Slow reaction</i>	<i>+Ve result</i> after heat (cloudy solution)	<i>+Ve result</i> fast reaction (cloudy solution)	-----
Oxidation (KMnO₄)		<i>+Ve result</i> disappearance of the purple color of KMnO ₄ appearance of a brown precipitate	<i>+Ve result</i> disappearance of the purple color of KMnO ₄ appearance of a brown precipitate	<i>-Ve result</i>	-----
Acidity of Phenol	bromothymol blue	-----	-----	-----	Yellow- orange solution pH ≈6.2
	bromophenol blue	-----	-----	-----	Blue solution pH ≈4.6
Br₂ /H₂O		-----	-----	-----	<i>+Ve result</i> disappearance of the brown color of the bromine Appearance of white emulsion
FeCl₃		-----	-----	-----	<i>+Ve result</i> Appearance of purple color