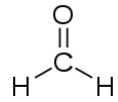
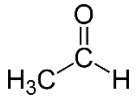
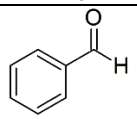
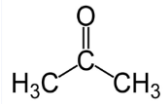
Aldehyde and Ketone

		Aldehyde			Ketone
	Name	Formaldehyde	Acetaldehyde	Benzaldehyde	Acetone
	Mol. Formula	CH_2O	C_2H_4O	C_7H_6O	C_3H_6O
	Mol. Structure				
	Physical state	Colorless - Liquid=gas	Colorless -Liquid	Colorless -Liquid	Colorless - Liquid
Carbonyl group	**Nickelophilic addition 2,4DNPH** 1ml of Aldehyde or Ketone+ 2,4DNPH *(But Ketone before add 2,4DNPH mixed with water)*	**+Ve result** Yellow-orange Precipitate	**+Ve result** Yellow-orange Precipitate	**+Ve result** Yellow-orange Precipitate	**+Ve result** Yellow-orange Precipitate
Oxidation and Reduction	**1-$KMnO_4$** 1ml of Aldehyde +NaOH+Δ	**+Ve result** disappearance of the purple color of $KMnO_4$ appearance of a brown precipitate	**+Ve result** disappearance of the purple color of $KMnO_4$ appearance of a brown precipitate	**+Ve result** disappearance of the purple color of $KMnO_4$ appearance of a brown precipitate	**- Ve result**
	2-Fehling,s (A+B) 1ml of Aldehyde +Fehling,s + Δ	**+Ve result** Red ppt of copper oxide appears	**+Ve result** Red ppt of copper oxide appears	**+Ve result** Red ppt of copper oxide appears (Long time)	**- Ve result**
	3-Ammonical silver Nitrate (Tollen,s) drop of silver Nitrate+ 10% NaOH black ppt+ NH_4OH add to of Aldehyde +Δ	**+Ve result** Silver mirror	**+Ve result** Silver mirror	**+Ve result** Silver mirror	**- Ve result**
Formaldehyde	**Salicylic acid** 1ml of Formaldehyde + Small amount of Salicylic acid +drop of conc H_2SO_4 carefully in side the wall of tube	**+ Ve result** Red color	**- Ve result**	**- Ve result**	**- Ve result**