

Compound	Glucose	Fructose	Lactose	Maltose	Sucrose	Starch
	C ₆ H ₁₂ O ₆	C ₆ H ₁₂ O ₆	C ₁₂ H ₂₂ O ₁₁	C ₁₂ H ₂₂ O ₁₁	C ₁₂ H ₂₂ O ₁₁	n(C ₆ H ₁₀ O ₅)
	$ \begin{array}{ccccccc} & \text{H} & \text{H} & \text{H} & \text{H} & \text{OH} & \text{H} \\ & & & & & & \\ \text{H} & -\text{C} & -\text{C} & -\text{C} & -\text{C} & -\text{C} & -\text{C}-\text{H} \\ & & & & & & \\ & \text{O} & \text{O} & \text{O} & \text{O} & \text{H} & \\ & & & & & & \\ & \text{H} & \text{H} & \text{H} & \text{H} & & \\ \end{array} $ Glucose <small>aldehyde sugar</small>	$ \begin{array}{ccccccc} & \text{H} & \text{H} & \text{H} & \text{OH} & & \text{H} \\ & & & & & & \\ \text{H} & -\text{C} & -\text{C} & -\text{C} & -\text{C} & -\text{C} & -\text{C}-\text{H} \\ & & & & & & \\ & \text{O} & \text{O} & \text{O} & \text{H} & \text{O} & \text{OH} \\ & & & & & & \\ & \text{H} & \text{H} & \text{H} & & & \text{ketone sugar} \end{array} $ Fructose <small>ketone sugar</small>				
Reaction						
Molisch Test α-naphthol in ethanol/ amount of sugar + 2ml water + reagent + drop of conc H ₂ SO ₄ carefully in side the wall of tube	+Ve res violt ring	+Ve res violt ring	+Ve res violt ring	+Ve res violt ring	+Ve res violt ring	+Ve res violt ring
Conc.H₂SO₄ Small amount of sugar in dry tube 1ml conc H ₂ SO ₄ + heat	+Ve res Immediate blackeing of the solid	+Ve res Immediate blackeing of the solid	+Ve res Immedi ate blackein g of the solid	+Ve res Immediate blackeing of the solid	+Ve res Immediat e blackeing of the solid	+Ve res Immediate blackeing of the solid
Barfoed Test Small amount of sugar + 1ml Barfoed reagent + heat 5min	+Ve res red ppt of copper oxide appears	+Ve res red ppt of copper oxide appears	-Ve res	-Ve res	-Ve res	-Ve res
Ammoniacal silver Nitrate drop of silver Nitrate + 10% NaOH black ppt + NH ₄ OH add to suger sol + heat	+Ve res Silver mirror	+Ve res Silver mirror	+Ve res Silver mirror	+Ve res Silver mirror	-Ve res	-Ve res

<p>Reduction of Fehling Soltion (A+B) Fehling Soltion (0.5 ml of Fehling A+ 0.5 ml of Fehling B) add to sugar sol</p>	<p>+Ve res red ppt of copper oxide appears</p>	<p>+Ve res red ppt of copper oxide appears</p>	<p>+Ve res red ppt of copper oxide appears</p>	<p>+Ve res red ppt of copper oxide appears</p>	<p>-Ve res</p>	<p>-Ve res</p>
<p>Furfural test Amount of sugar in 2ml water+3ml HCl + heat and hold paper over the mouth of tube</p>	<p>-Ve res</p>	<p>+Ve res Pink color</p>	<p>-Ve res</p>	<p>-Ve res</p>	<p>-Ve res</p>	<p>-Ve res</p>
<p>Ketose Test 1ml of dil sugar+ conc HCl + heat</p>	<p>-Ve res</p>	<p>+Ve res Orange col</p>	<p>-Ve res</p>	<p>-Ve res</p>	<p>+Ve res Orange col</p>	<p>-Ve res</p>