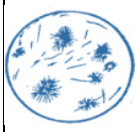
Laboratory Report (109 chem)

Experiment (8): Carbohydrates

Student Names: …… Section No: ……

Compounds / Reactions	Observation						Conclusion
	Glucose	**Fructose**	**Lactose**	**Maltose**	**Sucrose**	**Starch**	
Molisch Test: 1 ml **sugar solution** + 1ml reagent (α-naphthol in 1ml ethanol) + 1ml conc. H_2SO_4 by drop carefully inside the wall of tube							
Reduction of Fehling Solution (A+B): Fehling Solution (0.5 ml of Fehling A+ 0.5 ml of Fehling B) add to **sugar solution**	+ve Red ppt of copper oxide appears	+ve Red ppt of copper oxide appears	+ve Red ppt of copper oxide appears	+ve Red ppt of copper oxide appears	-Ve	-Ve	
Barfoed Test: Small amount of sugar + 1ml Barfoed reagent+ heat 5min	+ve Red ppt of copper oxide appears	+ve Red ppt of copper oxide appears	-Ve Red ppt. only after prolonged heating (more than15 min) as it is hydrolyzedto glucose and galactose.	-Ve Red ppt. only after prolonged heating (more than 15 min) as it is hydrolyzed to glucose	-Ve	-Ve	
Furfural test Amount of **sugar solution** +3ml HCl + heat and hold paper over the mouth of tube	-Ve violet color appears after some time.	+ve Violet color	-Ve violet color appears after some time.	-Ve violet color appears after some time.	+ve Violetcolor	-Ve Faint violet color after a long time	

Iodine Test (I_2 Solution) 1 mL **sugar solution** + Add 1 mL of I_2 solution	-Ve	-Ve	-Ve	-Ve	-Ve		
Tollen's reagent Ammoniacal silver Nitrate 0.5 ml $AgNo_3$+ 2drop 10% NaOH (black ppt)+5drops NH_4OH add to **sugar solution** + heat(1-2min)							
Osazone formation: Take solid sugar, phenyhydrazine hydrochlorid e, and sodium acetate in the ratio of 1:2:3. - Add 5 drops of water. - Place in a hot water bath for 10-15 minutes.	Yellow ppt. yellow needles aggregated in the form of sheaves.  Glucosazone or Fructosazone				-Ve	-Ve	
Water Solubility Test: Amount of sugar + 1ml water							

Question:

1) What is the chemical formula for carbohydrates?