

Laboratory Report (109 chem)

Experiment (9): Carbohydrates

Student Names: Section No:

Compounds Reactions	Observation						Result
	Glucose	Fructose	Lactose	Maltose	Sucrose	Starch	
<u>Molisch Test:</u> 1ml sugar solution + 1ml reagent (α -naphthol in 1ml ethanol) + 1ml conc. H_2SO_4 by drop carefully inside the wall of tube							
<u>Reduction of Fehling Solution (A+B):</u> Fehling Solution (0.5 ml of Fehling A + 0.5 ml of Fehling B) add to sugar solution							

Compounds Reactions	Observation						Result
	Glucose	Fructose	Lactose	Maltose	Sucrose	Starch	
<u>Barfoed Test:</u> 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 than 15 min) as it is hydrolyzed to glucose and galactose.	-Ve Red ppt. only after prolonged heating (more than 15 min) as it is hydrolyzed to glucose	-Ve	-Ve	
<u>Furfural test</u> Amount sugar solution + 3ml HCl + heat and hold paper over the mouth of tube	-Ve violet color appears after sometime.	+ve Violetcolor	-Ve violet color appears after some time.	-Ve violet color appears after some time.	+ve Violetcolor	-Ve Faint violet color after a long time	
<u>Iodine Test (I₂ Solution)</u> 1 mL sugar solution + heat + Add 1 mL of I ₂ solution	-Ve	-Ve	-Ve	-Ve	-Ve		

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	Glucose	Fructose	Lactose	Maltose	Sucrose	Starch	
<u>Tollen's reagent</u> <u>Ammoniacal silver Nitrate</u> 0.5 ml AgNO_3 + 2drop 10% NaOH (black ppt)+5drops NH_4OH add to sugar solution +heat(1-2min)							
<u>Water Solubility Test:</u> Amount of sugar + 1ml water							