

Experiment 3: Electrolytes and Nonelectrolytes

Version 3

Name: _____ **Date:** _____

Lab Partner: _____ **Section:** _____

Experimental Data

Unknown Sample Number _____

Table 1. Conductivity and pH of the Known Solutions

Known Solutions	Conductivity ()	pH
1) 0.50 M glucose (C ₆ H ₁₂ O ₆)		
2) 50 % isopropyl alcohol (C ₃ H ₈ O)		
3) 0.50 M acetic acid (HC ₂ H ₃ O ₂)		
4) 0.50 M hydrochloric acid (HCl)		
5) 0.50 M magnesium sulfate (MgSO ₄)		
6) 0.50 M aluminum chloride (AlCl ₃)		
7) Deionized water (H ₂ O)		

Table 2: Tests Results for Glucose and Isopropyl Alcohol Mixed With Several Test Reagents

Known Solutions	Observations Upon Mixing	
	Chromic acid	Benedict's reagent
1) 0.50 M glucose (C ₆ H ₁₂ O ₆)		
2) 50 % isopropyl alcohol (C ₃ H ₈ O)		

Name: _____

Table 3: Tests Results for Ionic Compounds and Acids Mixed With Several Test Reagents

Number and Identity Known Solutions	Observations Upon Mixing		
	0.2 M AgNO ₃	0.2 M Na ₂ CO ₃	3 M NH ₄ OH
3) 0.50 M acetic acid (HC ₂ H ₃ O ₂)			
4) 0.50 M hydrochloric acid (HCl)			
5) 0.50 M magnesium sulfate (MgSO ₄)			
6) 0.50 M aluminum chloride (AlCl ₃)			

Analyses Performed on Unknown and Results

Unknown Solution Number _____

Identity of Unknown Solution _____