

NEATH PORT TALBOT COLLEGE COLEG CASTELL NEDD PORT TALBOT

School of Maths & Science Science Practical

Inorganic Plan 4

◆ Aim

Devise and execute a suitable plan to identify five solutions.

◆ Introduction

This task tests *your* knowledge of qualitative inorganic analysis and your ability to use this information to devise a testing strategy to identify five solutions. You will be provided with five solutions. You will be told what the five solutions are but not which one is which. They will be labelled U, V, W, X and Y. You can only use the five solutions and no other chemicals or reagents.

◆ Safety



Control Measures

- The wearing of safety glasses and a laboratory coat at all times will be sufficient to take account of most hazards and significant risks.
- You are reminded of the need of good laboratory practice in order to maintain a safe working environment.

Hazards



Harmful/ Irritant: treat all solutions as potentially harmful. The solutions of barium and lead are toxic.

◆ Procedure

You are provided with five solutions from which the labels have become detached. The five solutions are: sodium iodide, lead nitrate, sodium hydroxide, barium nitrate and magnesium sulfate. You are not allowed to use any other reagents other than the solutions themselves. Devise a suitable plan that will allow you to identify each solution. When your plan has been checked you may use it to identify the solutions.

◆ Questions

1. Write ionic equations for all the reactions leading to the formation of a precipitate.
2. Are there any potential problems with the testing methods? For example solutions of borderline solubility?