**Year 11 ATAR Chemistry**

***Practical Investigation***

**Identification of Solutions**

Name:

This assessment comprises two parts:

Preparation and a practical assessment.

**You will be given a set of unknown colourless solutions. Your task is to use your knowledge of acids and bases and solubility rules to identify the unknowns.**

The unknown solutions are:

H2SO4, HCl, AgNO3, ZnSO4 , BaCl2 , NaCl

Which will be randomly labelled : A, B, C, D, E, F

You will be given the following chemicals

Universal indicator, KOH, KCl, NaSO4, Ba(NO3)2

**Step 1:**

Plan an investigation to correctly identify each solution.

* Write out your proposed plan of chemical or physical tests  
   (You could use a flow chart similar to the final page or table to show how you will do your investigation). You must do more than one test on each substance for clear identification.
* List the equipment (glassware, other chemicals etc) required.  
  (Be as specific as possible)
* Identify the safety requirements.
* Draw up a suitable table to record your results.

**Step 2:** (Thursday 31/10/2019, one hour)

* Carry out the tests and identify the substances

**Procedure:** [4 marks]

*Write a procedure (or set of procedures) which describes how you will identify each solution. Include laboratory equipment needed.*

Safety: [ \_\_\_\_\_\_/ 2 marks]

*Are there any safety consideration? What are they? How will you manage the risks to stay safe?*

Draw up a suitable table for recording your results, this will be sighted by the teacher before commencing the practical test \_\_\_\_\_\_\_\_\_/2

Show your teacher your experimental set–up before commencing work \_\_\_\_\_/ 2

Recording of observations [ /4]

Conclusion: [18 marks]

*What are each of the unknown solutions?*

|  |  |  |
| --- | --- | --- |
| Bottle | Solutions | Reason/evidence |
| A |  |  |
| B |  |  |
| C |  |  |
| D |  |  |
| E |  |  |
| F |  |  |

**Example of flow chart:**

