**Reaction Rate**

**Investigating the reactivity of acids with metal**

**Introduction**

**Part A – Reactivity of acids**

**Aim**:

**Hypothethesis**:

**Method**:

**Materials**:

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**Diagram**:

**Procedure**:

Indepentant variable:

Dependant variable:

Controlled variables:

**Risk assessment:**

Table 1 – Possible risks in experiment

|  |  |  |  |
| --- | --- | --- | --- |
| Source of risk | What amount of harm could it cause? | Safety precautions taken | If an incident occurred what should I do? |
|  | Minor  Significant  major |  |  |
|  | Minor  Significant  major |  |  |
|  | Minor  Significant  major |  |  |

**Results:**

**Table 2:** Masses for the reaction

|  |  |  |
| --- | --- | --- |
| **Type of acid** | **Mass of Magnesium (g)** | |
| **m1**  **Start of experiment** | **m2**  **After 5 min in acid** | **% of metal remaining**: (m2/m1 ) x 100 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Table 3:** Temperature inside reaction beaker

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Type of acid** | **Temperature in reaction beaker (oC)** | | | | | |
|  | **Before Mg added**  **(start)** | **1min** | **2min** | **3min** | **4min** | **5min** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**Graph 1:**

Makje your graph in excel and cut and paste in here. There should be three sets of data (one for each acid) and fitting trend lines may be very difficult, so you may choose not to do this.Don’t forget titles and axis labels with units. You can change the scale of the axis in excel, so don’t feel you need to start temperature at zero on your axis.

**Part B – The effect of concentration of Acid**

**Method**:

**Modification of Procedure (reactivity of acids):**

**Materials**:



**Diagram**:

Independent Variable:

Dependent Variable:

Controlled Variables:

**Results**:

Table 4:

Graph 2:

Make your graph in excel and paste in here, but make sure you fit a trend kine and show the equation to the trend line.

**Discussion**:

**Conclusion**: