Reactivity series: Worksheet 4.2

Comparing metals

1 g of each metal is reacted with an identical volume of acid in this apparatus.



Each metal releases different volumes of hydrogen in the first minute.

|  |  |
| --- | --- |
| **Metal used** | **Volume of hydrogen released in 1 minute (cm3)** |
| **1** | **2** | **3** | **Mean** |
| Zn | 9 | 15 | 9 |  |
| Fe | 4 | 5 | 3 |  |
| Mg | 30 | 31 | 32 |  |
| Cu | 0 | 0 | 0 |  |

1. List the *dependent*, the *independent* and the *control* variables in this investigation.

1. Calculate the mean result for each metal and put the metals in order of decreasing reactivity.

1. Most of these results are repeatable. Identify one that is anomalous and suggest a possible cause.

1. Gas syringes are very expensive. Suggest an alternative way of comparing the reactivities of these metals with acids.