Chlorine and magnesium lab introduction

Introduction

The purpose of this lab experiment is to determine the atomic weight of magnesium by measuring the amount of hydrogen gas evolved when hydrochloric acid reacts with magnesium. The reaction is as followed: $Mg + 2HCL ? H_2 + Mg^{2+}(aq) + 2Cl^-(aq)$ In this experiment there is a one to one relationship between the number of moles of hydrogen gas evolved and the moles of magnesium metal consumed in the reaction.

Therefore in the finding of the experiment moles of H_2 evolved is equal to the moles of Mg consumed, and atomic weight of Mg is equal to the weight of Mg consumed per moles of H_2 evolved. Procedure 1st. Obtain a 600ml beaker, add 300ml of water 2nd. add 30ml of HCl (2M) to the beaker and stir 3rd. add 10mg of Magnesium metal to the beaker 4th. Allow hydrogen gas to evolve, all of the magnesium should be consumed. 6th. Record the amount of hydrogen gas evolved using the chemical property dialog. Observations and Results Moles of hydrogen evolved: $0.000829g$ (8.29×10^{-4})/ 0.000411 moles, (4.1×10^{-4})

Calculated atomic weight of magnesium: Atomic weight of Mg = weight of Magnesium/moles of H_2 Moles of H_2 evolved = moles of Mg consumed Atomic weight of Mg= /0.000411moles During myobservationI noticed that when 10mg of magnesium metal was added to the beaker a shaded area appeared on the bottom of the beaker. When the bubbles stopped and the shaded area in the beaker disappeared it showed that the magnesium has been consumed. Discussion Conclusion < Within a few sentences, provide a concluding statement about the results of your laboratory>