

Download File PDF Reaction Rates Worksheet

#Jenny



Finally I get this ebook, thanks for all these I can get now!

#Rio



Cool! I'am really happy

#Markus Jensen



I did not think that this would work, my best friend showed me this website, and it does! I get my most wanted eBook

#Hun Tsu



wtf this great ebook for free?!

#Che Salsa



My friends are so mad that they do not know how I have all the high quality ebook which they do not!

#Diego Butler



so many fake sites. this is the first one which worked! Many thanks

Chemistry 12 Unit 1- Reaction Kinetics
KEY
Chemistry 12
Worksheet 1-1 - Measuring Reaction Rates

1. A chemist wishes to determine the rate of reaction of zinc with hydrochloric acid. The equation for the reaction is:

$$\text{Zn(s)} + 2\text{HCl(aq)} \rightarrow \text{H}_2\text{(g)} + \text{ZnCl}_2\text{(aq)}$$

A piece of zinc is dropped into 1.00 L of 0.100 M HCl and the following data were obtained:

Time	Mass of Zinc
0 s	0.016 g
4 s	0.014 g
8 s	0.012 g
12 s	0.010 g
16 s	0.008 g
20 s	0.006 g

a) Calculate the Rate of Reaction in grams of Zn consumed per second.

$$\text{Rate} = \frac{\Delta \text{mass}}{\Delta \text{time}} = \frac{0.016 - 0.006 \text{ g}}{20 - 0 \text{ s}} = \frac{0.010 \text{ g}}{20 \text{ s}}$$

Answer: $5 \times 10^{-4} \text{ g/s}$

b) Calculate the Rate of Reaction in moles of Zn consumed per second.

$$5 \times 10^{-4} \frac{\text{g}}{\text{s}} \times \frac{1 \text{ mol Zn}}{65.4 \text{ g Zn}} = 7.6 \times 10^{-6} \frac{\text{mol Zn}}{\text{s}}$$

Answer: $8 \times 10^{-6} \text{ mol Zn/s}$

c) Write out the complete ionic equation for the reaction.

$$\text{Zn} + 2\text{H}^+ + 2\text{Cl}^- \rightarrow \text{H}_2\text{(g)} + \text{Zn}^{2+} + 2\text{Cl}^-$$

d) What will happen to the [H⁺] as the reaction proceeds? decrease

e) What will happen to the [Cl⁻] as the reaction proceeds? no change (spectator)

2. When magnesium is reacted with dilute hydrochloric acid (HCl), a reaction occurs in which hydrogen gas and magnesium chloride is formed.

a) Write a balanced formula equation for this reaction.

$$\text{Mg} + 2\text{HCl(aq)} \rightarrow \text{H}_2\text{(g)} + \text{MgCl}_2\text{(aq)}$$

Worksheet 1-1 Measuring Reaction Rates Page 1

[Download PDF version of :](#)
Reaction Rates Worksheet