

Chemistry 1500, Dr. Hunter

Summer 2004

Quiz # 4 (Group Part)

Name: _____, _____ Signature: _____

Name: _____, _____ Signature: _____

Name: _____, _____ Signature: _____

Name: _____, _____ Signature: _____

Name: _____, _____ Signature: _____

Name: _____, _____ Signature: _____

Last name**First name**

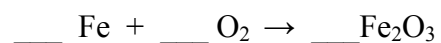
The group portion of this quiz has one page of questions plus this title two pages. Please make sure you have all pages. Place the names (last name first) and signatures of each group member above. *Initial each page of the exam in the top right hand corner* using the initials of the first group members so that if your exam pages get separated I can match them to your group.

To obtain maximum credit for each question, show your work in detail. Partial credit for questions will not be assigned if no work is shown. **Indeed, no credit will be granted if complete work is not shown even for correct answers.** Feel free to use pictures/diagrams to illustrate your text answers and/or to use short text explanations to explain your drawings if your pictures are ambiguous. If you have to make assumptions, etc., to complete any answers, write me a short note stating and/or explaining your assumptions and testing them to the degree possible.

You have 20 minutes for the group part of this quiz. The ten points for the group part of this quiz correspond to 2.5% of the 100 overall points for this course.

Grade /10 (group) \Rightarrow /2.5%

1 (10 points total). Balance the following equation:

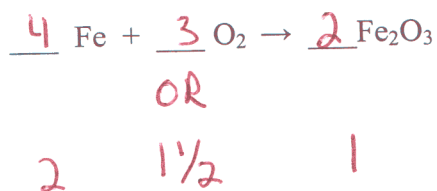


2 Determine the number of moles of iron present in 224 g Fe.

3 Use your balanced equation to determine the number of moles of iron(III) oxide that is produced.

4 How many grams of Fe_2O_3 would be produced?

1 (10 points total). Balance the following equation:



2 Determine the number of moles of iron present in 224 g Fe.

$$\frac{x \text{ mol}}{224 \text{ g}} = \frac{1 \text{ mol}}{56 \text{ g}}$$

$$x = \frac{224 \text{ g} (1 \text{ mol})}{56 \text{ g}}$$

$$x = 4 \text{ mol}$$

3 Use your balanced equation to determine the number of moles of iron(III) oxide that is produced.

if Fe = 4 mol normal reaction



$$2 \text{ mol Fe}_2\text{O}_3$$

4 How many grams of Fe₂O₃ would be produced?

from PT

$$\frac{x \text{ g}}{2 \text{ mol}} = \frac{160 \text{ g}}{1 \text{ mol}}$$

$$x = \frac{160 \text{ g} (2 \text{ mol})}{1 \text{ mol}}$$

$$x = 320 \text{ g}$$