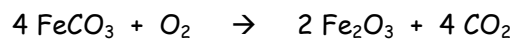


Percentage Yield

Name - _____

1.) The roasting of siderite ore, FeCO_3 , produces iron (III) oxide in the reaction below.



A 35.0 g sample of siderite ore produces 22.5 g of Fe_2O_3 . What is the percentage yield of the reaction?

2.) The reaction $\text{SiO}_2 + 4 \text{HF} \rightarrow \text{SiF}_4 + 2 \text{H}_2\text{O}$ produces 2.50 g of H_2O when 12.20 g of SiO_2 is treated with an excess of HF.

a.) What mass of SiF_4 is formed?

b.) What mass of SiO_2 is left unreacted?

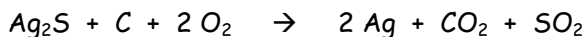
c.) What is the percentage yield of SiF_4 ?

3.) When 5.00 kg of malachite ore containing 4.30% of malachite, $\text{Cu}_2(\text{OH})_2\text{CO}_3$, is heated, the product is copper (II) oxide.



If the reaction has an 84.0% yield, how many grams of CuO are produced?

4.) A mine produces a silver ore named argentite, Ag_2S . The ore is smelted according to the overall reaction



A sample of pure Ag_2S has a mass of 152.6 g. When smelted, the sample produces 117.4 g of pure silver.

What is the percentage yield of the smelting process?



Hopeful parents

Answers - 1.) 93.4%

2a.) 7.23 g SiF_4

b.) 8.03 g SiO_2

c.) 34.3%

3.) 130. g CuO

4.) 88.4%