CRISPY CHEMISTRY
LIMITING REACTANTS LAB

The recipe for Crispy Chem Bars is as follows:

1 unit fat
+ 16 units simple sugar
+ 24 units complex carbohydrates
one Crispy Chem Bar Batch

In the Chem kitchen we found that:

One unit of fat = 56 g
One unit of simple sugar = 12.5 g
One unit of complex carbohydrates = 7 g

Please show your work!

1. Your group is given 28 g of fat, 50 g of simple sugars, and 60 g of complex carbohydrates. How many ***units*** of each do you have?

   a. fat-

   b. simple sugar-

   c. complex carbohydrates-

2. Given the number of units of each of the ingredients, how many ***batches*** of Crispy Chem Bars would each ingredient make?

   a. fat-

   b. simple sugar –

   c. complex carbohydrate –

3. Which ingredient is the limiting reactant?

4. How much of the other ingredients would be left over?

5. Fill in the blanks below with the masses to be used in the laboratory portion of this activity. For our purposes, use the amounts necessary to produce ¼ of a batch.

   _____g fat + _____g simple sugars + _____g complex carbohydrates →

   → _____g Crispy Chem Bars

Teacher initials _____ [necessary before you get supplies and proceed with the lab activity]

REMINDERS:

1 unit fat
+ 16 units simple sugar
+ 24 units complex carbohydrate
One Crispy Chem Bar Batch

1 unit of fat = 56 g
1 unit of simple sugar = 12.5 g
1 unit of complex carbohydrate = 7 g

Procedure:

Melt the fat over low heat. Add simple sugars to the melted fat and melt slowly. This mixture should stay white and fluffy. Add complex carbohydrates slowly to the fat and simple sugar mixture, stirring until well coated. Pour the completed mixture onto waxed paper and shape into something cute, like a bunny, mouse or spider. Mass product. Cut into squares and enjoy.