**Mini-quiz 23 Chem 1013 Friday 2 May 2014 4 pts**

**Your name: \_\_\_\_\_\_\_\_\_\_answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 44 32 44 18 g/mol

For the reaction: C3H8 + 5O2 🡪 3CO2 + 4H2O

 8.000 g C3H8 and 8.888 g O2 are combined in the above, balanced reaction.

What is the limiting reagent ? C3H8 O2 (circle choice)

Mol C3H8= 8/44 =0.1818 => mol H2O/Mol C3H8=4/1=x/0.1818=>x=4\*0.1818=0.7272

**Mol O2 = 8.888/32=0.2777=> mol H2O/mol O2 =4/5=x/0.2777=> x=4\*0.2777/5=0.2222 limits**

**Or: theory O2/C3H8 = 5/1=5**

 **Actual O2/C3H8= .2777/0.1818=1.52 => not enough O2…limits**

1. How many grams of H2O can be formed from 8.000 g C3H8 and 8.888 g O2 ? (show work)\_

**0.222 mol H2O \* 18 g/mol = 4 g**

 \_\_\_**4**\_\_\_\_ g H2O