**Assignment 7**

**Stoichiometric Calculations**

1.

1. 9.5 g Na ; 23 g Na ; 1 mol O2 ; 4 mol Na ; 0.103 mol O2
2. 4 mol Na ; 2 mol Na2O ; 23 g Na ; 1 mol Na ; 9.27 g Na

2. Equation Balancing 2:5:4:2

1. 78.2 g C2H2
2. 14.3 g C2H2

**Assignment 8**

**Stoichiometry Practice Worksheet**

1. 1:3:2
2. 2:17:12:10 \*\*\*combustion reaction and a weird one
3. 1:1:1:1:1
4. 2:3:1:6
5. 3:2:2:1
6. 355.25 g Na2SO4
7. 313.5 g LiNO3

**Assignment 9**

(Continued from above)

1. 112.7 g ; 43.7 g
2. O2
3. 13.6 g C2H2 used ; 99.1 g C2H2 in excess
4. 80.1%

**Assignment 10**

(Continued from above)

1. 3 HC2H3O2 + 1 Al(OH)3 → 3 H2O + 1 Al(C2H3O2)3
2. 141.7 g
3. HC2H3O2
4. 54.2 g of Al(OH)3 used; 665 g Al(OH)2 in excess

**Assignment 11**

**Percent Yield 1**

1. 2 FePO4 + 3 Na2SO4 → 1 Fe2(SO4)3 + 2 Na3PO4
2. 32.5 g Fe2(SO4)3
3. 56.9%
4. Yes, the answer falls between 0-100%
5. 7.5 g Na3PO4

**Assignment 12**

**Worksheet: Percent Yield 2**

2. 64.9 g C6H5)
3. 98.2%

2.

1. 96.2%
2. 88.3%

**Assignment 13**

**Worksheet: Limiting Reactants 1**

1. Balance - 4:3:2:6
2. 6 mol Cl2
3. FeCl3
4. O2

2.

1. 21.7 g H2O
2. O2
3. C2H6

**Assignment 14**

**Limiting Reactant Worksheet 2**

1. 36.1 g FeCl3
2. 83.7g Al2O3
3. 81.7%
4. 79.5%
5. 93.2%
6. 12.19g Na2CO3

**Assignment 15**

(Continued from above)

1. 45.98 g Fe2O3
2. 0.14 mol O2 is Limiting ; 0.112 mol NO obtained
3. 50.4 g NaClO

**Assignment 16**

**Limiting Reactant and Percent Yield Worksheet**

1. 3.22 mol Al is EXCESS ; 6.96 mol HBr is LIMITING
2. 26.62 mol FeS2 is EXCESS ; 59.44 mol O2 is LIMITING
3. 600 g Si is LIMITING ; 500 g N2 is EXCESS
4. 10 g Al2(SO3)3 is LIMITING ; 10 g NaOH is EXCESS

**Assignment 17**

(Continued from above)

1. 14.4 mol H2O is theoretical yield ; 83.3% yield of H2O
2. 33.1 g Fe2(SO4)3 is theoretical yield ; 55.9% yield of Fe2(SO4)3
3. 146.5 g K2CO3 is theoretical yield ; 85.3% yield of K2CO3