

3.50 % → g → mole → RATIO

$C_x H_y O_z$  ← Moles

$C_{13} H_{19} O_2 = 206 \text{ g/mole}$

$\frac{75.6 \text{ g}}{12 \text{ g}} = 6.31 \text{ mole C}$

$\frac{15.5 \text{ g O}}{16 \text{ g O}} = 0.97 \text{ mole O}$

$\frac{6.31 \text{ mole C}}{0.97} = 6.5$  (13)

$\frac{8.8 \text{ mole H}}{0.97} = 9$  (18)

$\frac{0.97 \text{ mole O}}{0.97} = 1$  (2)

Divide by smallest #

Sep 27-8:02 AM

①  $2 \text{ Al(OH)}_3 + 3 \text{ H}_2\text{SO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + 6 \text{ H}_2\text{O}$

0.5 mole  $\text{Al(OH)}_3$  (LR) 0.5 mole  $\text{H}_2\text{SO}_4$  (LR) ? mole  $\text{Al}_2(\text{SO}_4)_3$

①  $\frac{0.5 \text{ mole Al(OH)}_3}{2 \text{ mole Al(OH)}_3} = 0.25 \text{ mole Al}_2(\text{SO}_4)_3$

②  $\frac{0.5 \text{ mole H}_2\text{SO}_4}{3 \text{ mole H}_2\text{SO}_4} = 0.17 \text{ mole Al}_2(\text{SO}_4)_3$  (LR)

$\frac{0.5 \text{ mole H}_2\text{SO}_4}{2 \text{ mole Al(OH)}_3} = 0.33 \text{ mole Al(OH)}_3$  used

0.5 start - 0.33 used = 0.17 mole  $\text{Al(OH)}_3$  left over

Sep 27-8:39 AM

3/74

Sep 27-8:44 AM