

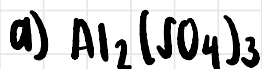
6.30: How many moles of aspirin,  $C_9H_8O_4$ , are in 500mg tablet?

$$500 \text{ mg aspirin} \times \frac{1 \text{ g aspirin}}{1000 \text{ mg aspirin}} = .5 \text{ g aspirin}$$

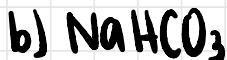
$$\begin{array}{l} C_9 = 12.01 \times 9 = 108.09 \\ H_8 = 1.008 \times 8 = 8.064 \\ O_4 = 15.9994 \times 4 = 63.9976 \\ \hline 180.1516 \\ = \\ 180 \text{ g} \end{array}$$

$$.5 \text{ g aspirin} \times \frac{1 \text{ mol aspirin}}{180 \text{ g aspirin}} = 2.78 \times 10^{-3} \text{ mol of aspirin}$$

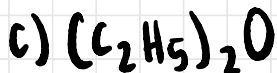
6.32: calculate molar masses of following:



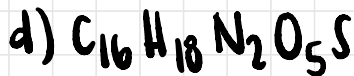
$$\begin{array}{l} Al_2 = 26.98153 \times 2 = 53.96306 \\ S = 32.065 \times 3 = 96.195 \\ O = 15.9994 \times 12 = 191.9928 \\ \hline 342.15086 \\ = \\ 342 \text{ g/mol} \end{array}$$



$$\begin{array}{l} Na = 22.98976 \\ H = 1.001 \\ C = 12.011 \\ O_3 = 15.9994 \times 3 = 47.9982 \\ \hline 83.99996 \\ = \\ 84.0 \text{ g/mol} \end{array}$$



$$\begin{array}{l} C = 12.011 \times 4 = 48.044 \\ H = 1.001 \times 10 = 10.01 \\ O = 15.9994 \\ \hline 74.0534 \\ = \\ 74.0 \text{ g/mol} \end{array}$$



$$\begin{array}{l} C_{16} = 12.011 \times 16 = 192.176 \\ H_{18} = 1.001 \times 18 = 18.018 \\ N_2 = 14.00674 \times 2 = 28.01348 \\ O_5 = 15.9994 \times 5 = 79.997 \\ S = 32.065 \\ \hline 350.26948 \\ = \\ 350. \text{ g/mol} \end{array}$$