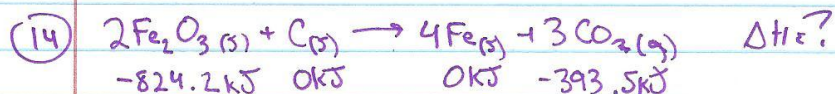


KEI

HW #29[#] p552 14,16,18 p353[#] 22,28

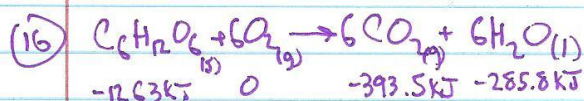


$$\Delta H = \sum \text{products} - \sum \text{reactants}$$

$$= 3(393.5) - 2(824.2)$$

$$\Delta H = 467.9 \text{ kJ}$$

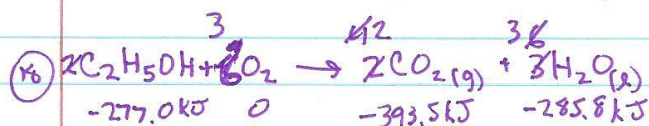
$$1 \text{ mol Fe} \times \frac{467.9 \text{ kJ}}{4 \text{ mol Fe}} = 117 \text{ kJ}$$



$$\Delta H = \sum \text{prod} - \sum \text{react}$$

$$= (6(-393.5 \text{ kJ}) + 6(-285.8 \text{ kJ})) - (6(0) + 1(-1263 \text{ kJ}))$$

$$= -2813 \text{ kJ in one mole (1:1263 ratio)}$$



$$\Delta H = [2(-393.5 \text{ kJ}) + 3(-285.8)] - (-277.0 \text{ kJ})$$

$$\Delta H = -1367.4$$

(22) (A) $\Delta H_f = 3.811 \text{ kJ/mol}$
 $q = 83.2 \text{ kJ}$

$$\Delta H_f = \frac{q}{\text{mol}}$$

$$3.811 \frac{\text{kJ}}{\text{mol}} = \frac{83.2 \text{ kJ}}{\text{mol}}$$

$$21.8 = \text{mol}$$

(B) $21.8 \text{ mol} \times \frac{\text{Molar Mass}}{\text{Mass}} = 5519 \text{ g}$
 $MM = 253 \frac{\text{g}}{\text{mol}}$

(28) $\Delta H = \frac{q}{\text{mol}}$
 $6.009 = \frac{q}{44,000 \text{ mol}}$

$$7.95 \times 10^5 \times \frac{1 \text{ mol}}{18.02 \text{ g}} = 44,000 \text{ mol}$$

$$2.65 \times 10^5 \text{ kJ} = q$$