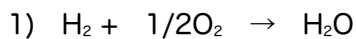


生物無機化学講義資料 9

練習問題



2) a) $1.65 \times 8 \times 2 = 26.4 \text{ m}^3$ $2.64 \times 10^4 \text{ L}$ $1 \text{ m}^3 = 1000\text{L}$
 $2.64 \times 10^4 \times 0.934 \times 10^{-2} = 247 \text{ L}$ (0.934%)
b) $247/22.4 = 11.0$ モル

3) a) $2.64 \times 10^4 \times 5.24 \times 10^{-6} = 0.0138 \text{ L}$ (5.24ppm)
b) $0.0138/22.4 = 6.16 \times 10^{-4}$ モル

4) $(24.6 \times 1.60 \times 10^{-19} \div 4.18) \times 6.02 \times 10^{23} = 567 \times 10^3 \text{ cal/mol}$
567

5) $\text{H}_2/\text{H}_2\text{O} = 2/18 = 1/9$

水素 $(60 \times 1000 \times 0.6 \times 1/9) \div 1.0 = 4000$ モル

酸素 $(60 \times 1000 \times 0.6 \times 8/9) \div 16.0 =$ モル

6) 水素 $\{ (60 \times 1000 \times 0.1) - (60 \times 1000 \times 0.6 \times 1/9) \} \div 1.0 = 2000$

酸素 $\{ (60 \times 1000 \times 0.65) - (60 \times 1000 \times 0.6 \times 8/9) \} \div 16.0 = 437.5$

$2000/437.5 = 1/0.22$