

Solutions Worksheet Answers

% m/v

- 0.0024%
- 110 mg
- 0.60 %
- 190 mL

% m/m

- 51 g
- 53.2 and 2.45 %
- 42 % platinum
- a) 21.1 % b) 9.72 %

% v/v

- 16 mL
- 3.0 %
- 90 mL
- 235 μ L

ppm & ppb

- $m = 0.0018 \text{ g}$ $n = 4.1 \times 10^{-5} \text{ mol}$
- $m = 2.0 \times 10^{-5} \text{ g}$ $n = 3.1 \times 10^{-7} \text{ mol}$
- mass per breath = $3.24 \times 10^{-8} \text{ g}$ breaths
= 3100 needed
- $m = 20000 \text{ g}$ or 20000 mL

c

- 198 L
- 0.061 mol
- $n = 0.125 \text{ mol}$ $m = 31.2 \text{ g}$
- 0.0405 L
- $n = 0.0642 \text{ mol}$ 135 mL
- 1.33 mol/L
- 22 g
- 0.00244 mol/L

Dilutions

- 2.4 mol/L
- 3.87 mol/L
- $V = 60.6 \text{ mL}$, so 20.6 mL added
- 0.336 mol/L
- a) 0.269 mol/L b) 0.0165 mol/L c) 0.0109 mol/L

Stoichiometry

- $m \text{ H}_2\text{O} = 5.32 \text{ g}$ c sodium carbonate = 9.83 mol/L
- 3.20 g
- 134 mL
- 0.075
- 0.505 g
- $2.11 \times 10^{-4} \text{ moles}$
- BaS - $n = 0$
 $\text{Fe}(\text{CH}_3\text{COO})_3$ $n = 0.000822 \text{ mol}$ c = 0.0243 mol/L
 $\text{Ba}(\text{CH}_3\text{COO})_2 = 0.00639 \text{ mol/L}$
 $\text{Fe}_2\text{S}_3 = n = 1.62 \times 10^{-4}$ c = 0 (solid)