

1	$M = \frac{M_1 F_1 + M_2 F_2}{F_1 + F_2} \Rightarrow M = \frac{(1 \cdot \text{amu} \times 6) + (1 \cdot \text{amu} \times 24)}{6 + 24} = 1.08 \text{ amu}$	10
1.5	$3\text{H}_2(\text{g}) + \text{N}_2(\text{g}) \rightarrow 2\text{NH}_3(\text{g})$ $\frac{6/18 \text{g}_{\text{NH}_3}}{17 \text{g}_{\text{NH}_3}} \times \frac{1 \text{ mol}_{\text{NH}_3}}{17 \text{g}_{\text{NH}_3}} \times \frac{3 \text{ mol}_{\text{H}_2}}{2 \text{ mol}_{\text{NH}_3}} \times \frac{22/4 \text{L}_{\text{H}_2}}{1 \text{ mol}_{\text{H}_2}} = 13/44 \text{L}_{\text{H}_2}$ $\frac{6/18 \text{g}_{\text{NH}_3}}{17 \text{g}_{\text{NH}_3}} \times \frac{1 \text{ mol}_{\text{NH}_3}}{17 \text{g}_{\text{NH}_3}} \times \frac{1 \text{ mol}_{\text{N}_2}}{2 \text{ mol}_{\text{NH}_3}} \times \frac{28 \text{g}_{\text{N}_2}}{1 \text{ mol}_{\text{N}_2}} = 5/6 \text{g}_{\text{N}_2}$	11
1	$\text{ppm} = \frac{\text{جرم حل شونده}}{\text{جرم محلول}} \times 10^6 = \frac{2 \times 10^{-5} \text{ g}}{400 \text{ g}} \times 10^6 = 0.05 \text{ ppm}$	12
1	$\text{درصد جرمی} = \frac{\text{جرم حل شونده}}{\text{جرم محلول}} \times 100 = \frac{5 \text{ g}}{(5+20) \text{ g}} \times 100 = 20\%$	13
1	$a = \frac{\Delta S}{\Delta \theta} = \frac{S_2 - S_1}{\theta_2 - \theta_1} \left\{ \begin{array}{l} (0.27) \\ (20.33) \end{array} \right\} \rightarrow = \frac{33 - 27}{20 - 0} \rightarrow S = 0.3\theta + 27$ $S = 0.3\theta + 27 = (0.3 \times 70) + 27 = 48 \text{ g}$	14
1	$\text{غلظت مولی} = \frac{\text{مول حل شونده}}{\text{حجم محلول بر حسب L}} \Rightarrow 0.2 \left(\frac{\text{mol}}{\text{L}} \right) = \frac{\text{mol}_{\text{NaNO}_3}}{0.2 \text{ L}} = 0.4 \text{ mol}_{\text{NaNO}_3}$	15
20	جمع نمره	خسته نباشید