

Homework Chapter 5

4. a. soluble or partially soluble (pulp)
b. soluble (very soluble)
c. soluble
d. soluble
e. insoluble

$$8. \quad 10 \text{ ppm} \rightarrow \frac{10 \text{ g}}{1,000,000 \text{ g solution}} \times \frac{10^{-3}}{10^{-3}} = \frac{0.01 \text{ g}}{1000 \text{ g solution}} = \frac{0.01 \text{ g}}{1 \text{ L}} = \frac{10 \text{ mg}}{\text{L}}$$

$$1 \text{ L} = 1000 \text{ mL} = 1000 \text{ g}$$

$$10 \text{ mg/L} > 350 \text{ } \mu\text{g/L} \therefore \text{water is safe.}$$

$$10. \quad (5.85 \text{ g NaCl}) \left(\frac{1 \text{ mol}}{58.44 \text{ g}} \right) = 0.1 \text{ mol NaCl}$$

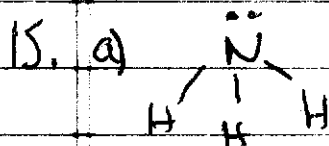
$$\text{Molarity} = \frac{\text{moles}}{V}$$

$$V = \frac{\text{moles}}{\text{Molarity}}$$

$$V = \frac{0.1 \text{ mol}}{0.1 \text{ M}}$$

$$V = \frac{0.1 \text{ mol}}{0.1 \frac{\text{moles}}{\text{L}}}$$

$$\boxed{V = 1 \text{ L}}$$



b) yes

c) yes

d) yes (polar)

21. a) Cl^-
b) Ba^{2+}
c) S^{2-}
d) Li^+
e) no ion.

22. a) Na_2S sodium sulfide
b) Al_2O_3 aluminum oxide
c) GaF_3 gallium fluoride
d) RbI rubidium iodide
e) BaSe barium selenide

23. a) $\text{Ca}(\text{HCO}_3)_2$
b) CaCO_3
c) MgCl_2
d) MgSO_4