

PS3
⑩

$$\begin{aligned}
 & {}^{301}\text{X} + {}^{304}\text{X} + {}^{309}\text{X} \\
 & \underbrace{.2740(300.911)}_{82.47} + \underbrace{0.2790(303.944)}_{84.8} + \underbrace{0.4470(308.963)}_{138.11} \\
 & \boxed{305.38}
 \end{aligned}$$

Oct 5-7:26 AM

⑪

132.9041g Cs	1 mole Cs
1 mole Cs	6×10^{23} atoms Cs

$2.2066097 \times 10^{-22} \text{ g/atom Cs}$

Oct 5-8:21 AM

⑨ X_2O_3 60% by mass = X

$$\%X = \frac{X_2}{X_2O_3} = 0.6$$

$$\frac{100}{X_2O_3} = \frac{0.6}{1}$$

$$\frac{100}{0.6} = \frac{X_2O_3}{1}$$

$X_2O_3 = 166.67$

$X = 50 \text{ g/mole}$
 $O = ? \text{ g/mole}$

$X_2O_3 = 166.67$
 $- 100 \text{ (2x50)}$
 $O_3 = 66.67$
 $O = 22.22 \text{ g/mole}$

Oct 5-8:23 AM

⑫ — atoms 2g Al

2g Al	1mole Al	6×10^{23} atoms Al
	26.98153g Al	1mole Al

6×10^{23} atoms & 6g element → Mole → Mass 22.4L GAS
 6×10^{23} molecules (compd.) → Mole → Mass 22.4L GAS

Oct 5-8:30 AM

FALL EXAM \Rightarrow Text chap 1 \rightarrow 4

Chap (1/E 106) \Rightarrow 2 \Rightarrow 5, 6, 7
 3 \Rightarrow 8, 9, 10
 4 \Rightarrow 11, 13

\rightarrow HW at end of chap daily
 \rightarrow Finish chap \rightarrow Problem set.

(last year's exam for HW/practice)

Oct 5-8:58 AM

Chap 4 - Solutions

Aqueous Solutions

Mixed with Water
 Salt water
 NaCl (aq)

homogeneous mixture even throughout.

Oct 5-9:03 AM

Make a solution

Solute + Solvent.

Gets dissolved
does the dissolving

(ex) NaCl(aq)
Salt.
Water

P 125 Table 4.1 ⇒ Solubility.

Oct 5-9:13 AM

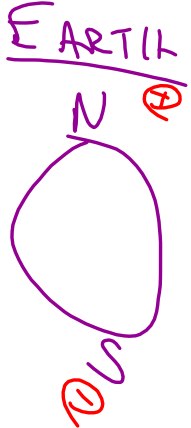
Solubility - will it dissolve?

(M) ^{ionic} Salt + Water → ✓
(M) Na ⁽⁺⁾ & (M) Cl ⁽⁻⁾

Oil + Water → ✗
Non-Polar
"No charge"

Polar substance
 of POLAR

\ominus
 $\begin{array}{c} \cdot\cdot \\ \cdot\cdot \\ \text{:O} - \text{H} \\ | \\ \text{H} \end{array}$
 \otimes

EARTH
 N^{\oplus}

 O^{\ominus}

Oct 5-9:18 AM

SolutionSolvent

Water (l)

(l)

Solute

Salt (s)

(l)

ex

→ Saltwater

→

AW

4 / #7

Oct 5-9:30 AM