

4.62g 0.750g Na_2SO_4 , 850 ml soln

Find M

Moles

| | |
|---|---|
| 0.750g Na_2SO_4 | <u>1 mole Na_2SO_4</u> |
| <u>0.850 l</u> | 152g Na_2SO_4 |

0.0058M \rightarrow 0.006M

Oct 7-7:26 AM

Find the Molarity of regular strength

Kool-Aid. \Rightarrow $\frac{1 \text{ container}}{8 \text{ gts}} \rightarrow 538\text{g}$

\approx SUGAR $\text{C}_6\text{H}_{12}\text{O}_6$ \Rightarrow Find M of regular strength Kool Aid.

1 gal = 3.78 l

$M = \frac{\text{mole sugar}}{\text{l of soln}}$

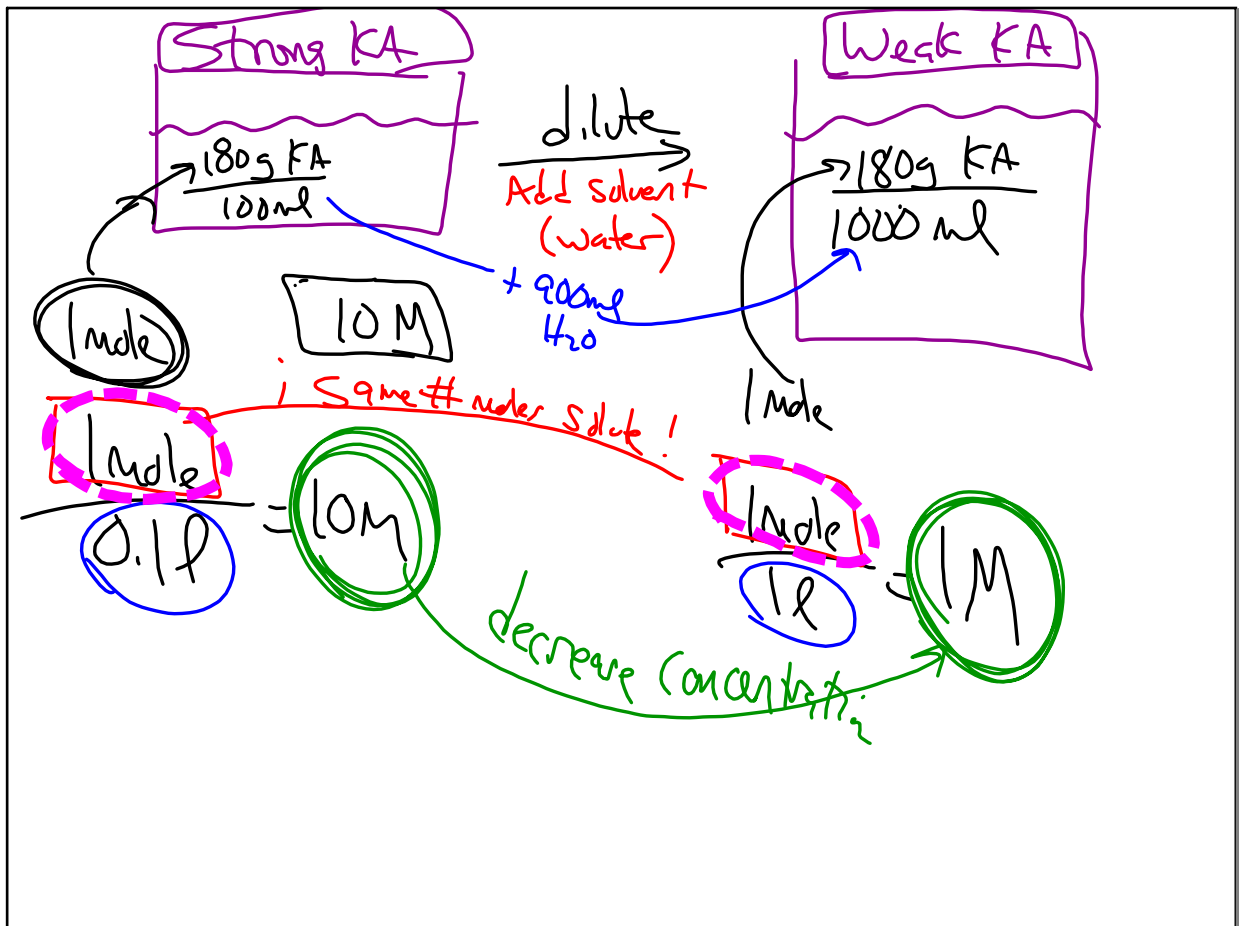
| | | |
|--|-------------------------------------|--|
| 538g $\text{C}_6\text{H}_{12}\text{O}_6$ | 4 gts 1 gal | <u>1 mole $\text{C}_6\text{H}_{12}\text{O}_6$</u> |
| 8 gts | <u>1 gal</u> <u>3.78 l</u> | 180g $\text{C}_6\text{H}_{12}\text{O}_6$ |

0.395M

Oct 7-8:24 AM

M increases Add more solute
Solution becomes more concentrated
"less solvent"
→ less concentrated?
Add more solvent → Dilute

Oct 7-8:42 AM



Oct 7-8:44 AM

Calculate Dilutions

Moles start = Moles END

Start

$$M \times l = M \times l$$

$$(12) (41.67 \text{ mL}) = (5) (100)$$

41.67 mL
12M HCl

END

$$M \times l = M \times l$$

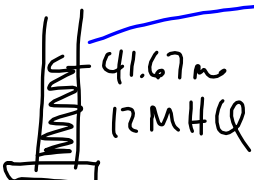
$$(5) (100)$$

$M = \frac{\text{moles}}{l}$

12M HCl

make 100ml 5M HCl

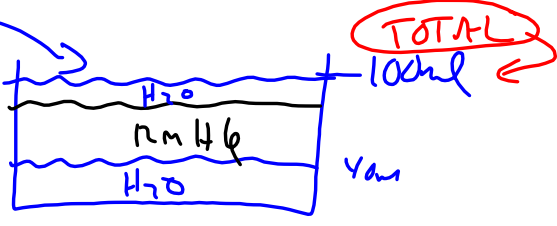
Oct 7-8:54 AM



41.67 mL
12M HCl

②

dilutes instantly



TOTAL

100 mL

Do what you "oughta"
Add the acid to the water

- ① Add H₂O → little bit ≈ 40 → 50 mL
- ② Add in 41.67 mL 12M HCl
- ③ Fill to 100 mL with water

Oct 7-9:01 AM

How many ml of SM $K_2Cr_2O_7$
 must be diluted to prepare 250ml of
 0.1M soln.

Moles start = Mole end.

$$M \times l = M \times l$$

$$(5) \text{ ml} = (0.1) (250 \text{ ml})$$

$$\text{5 ml}$$

Oct 7-9:06 AM

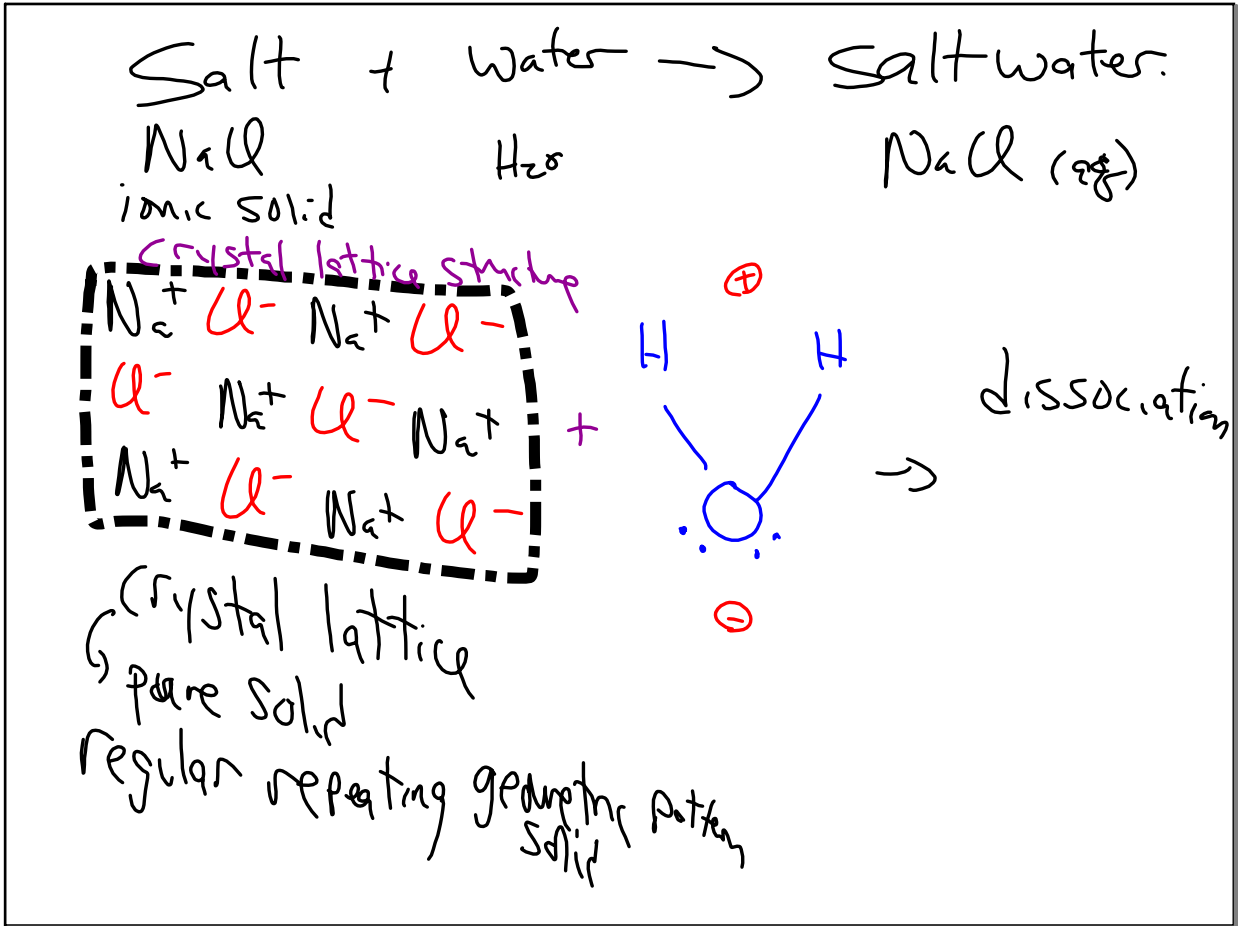
Electrolytes → soluble ion

\oplus
 Cation (eg)

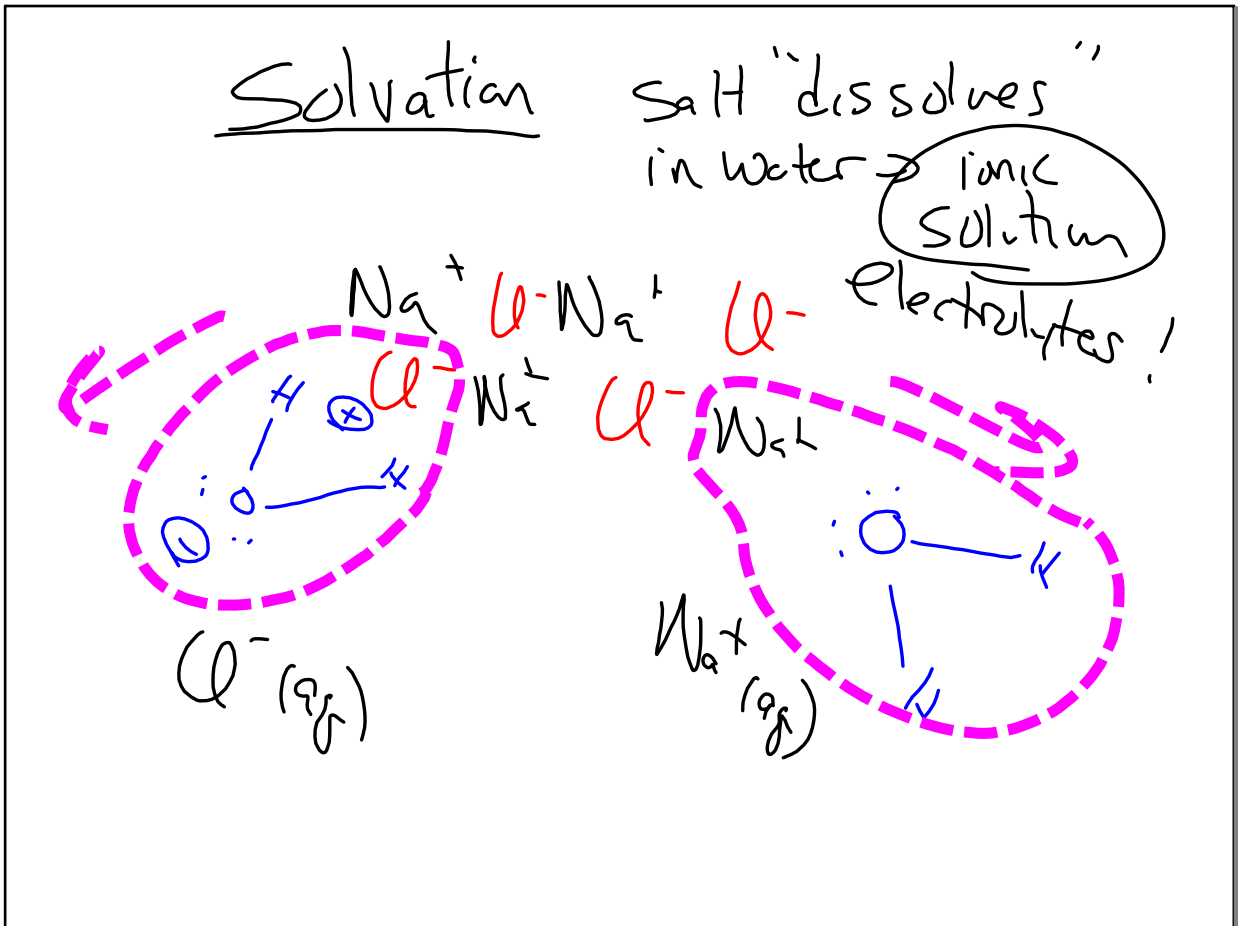
\ominus
 Anions (eg)

Table 4.2
 P125
 Solubility table.

Oct 7-9:14 AM



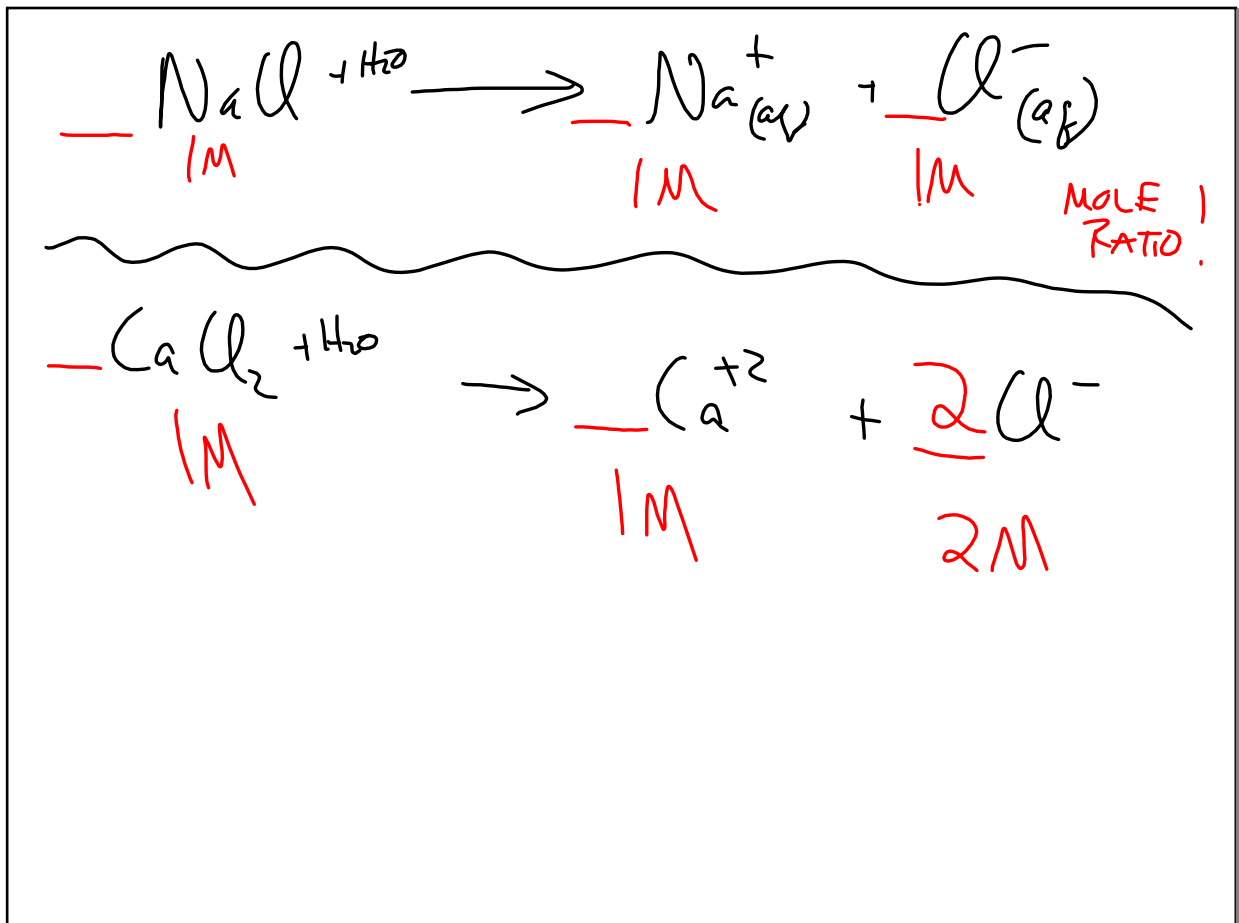
Oct 7-9:18 AM



Oct 7-9:21 AM

Strong electrolyte \rightarrow greater concentration (M)
more soluble
 VS
 Weak electrolyte \rightarrow of ions (charges) in solution
less. less soluble.

Oct 7-9:25 AM



Oct 7-9:27 AM

HW 4.74

Oct 7-9:30 AM