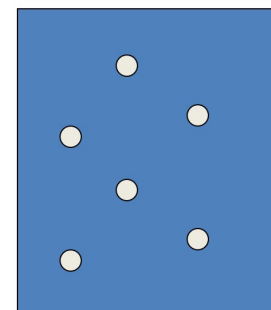
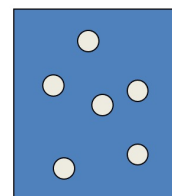
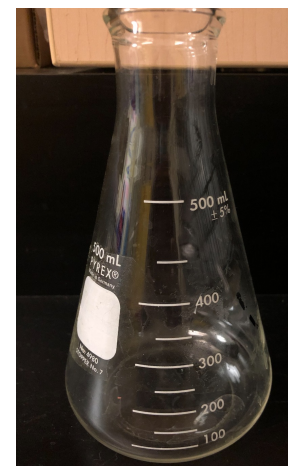
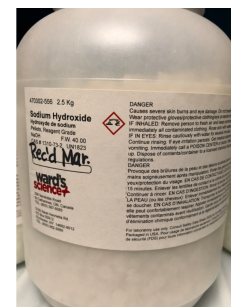
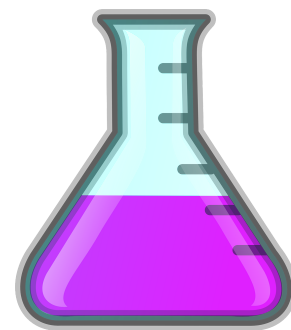


Preparing Solutions and Dilutions

- Preparing Solutions
- Solutions Mini Lab
- Dilutions
- Practice Questions with Walkthrough Answers
- Dilutions Mini Lab



Preview File

Please enjoy this preview of your Student Version of the presentation. Please note within this sample file:

- Some slides appear blank because they have been removed
- Student versions have portions of the text removed which is given in the teacher version and appear as _____ which the students are to fill in
- Other slides may have on them, this represents writing that has been removed on this sample

**The paid full version of your resource
includes both Google Slides and
PowerPoint and is
Google Classroom Ready**



Preparing Solutions

- _____
- This has to be considered when preparing solutions
- To properly prepare a solution, chemists use volumetric flasks, which are accurate and allow for proper mixing

**This Slide Has Been
Removed**

Steps to Preparing a Solution

3. Add enough solvent to dissolve solute (do not add required, just enough to dissolve!).

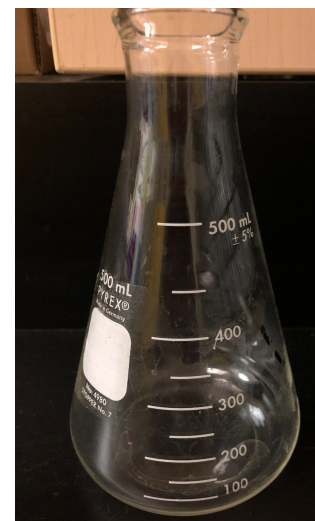
- Pipettes are good for adding liquid solutes



Pipette

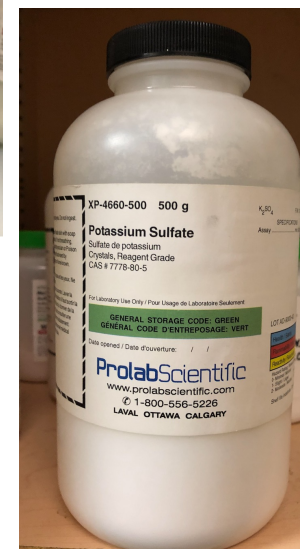
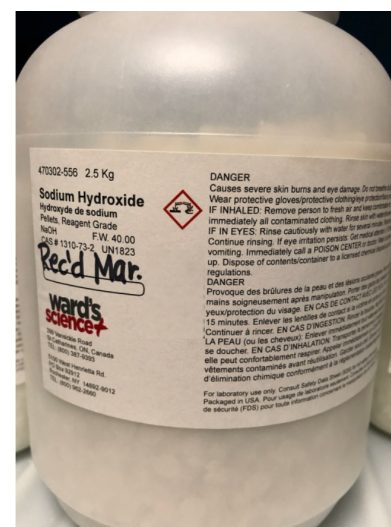
4. Mix! (Swirl)

5. _____

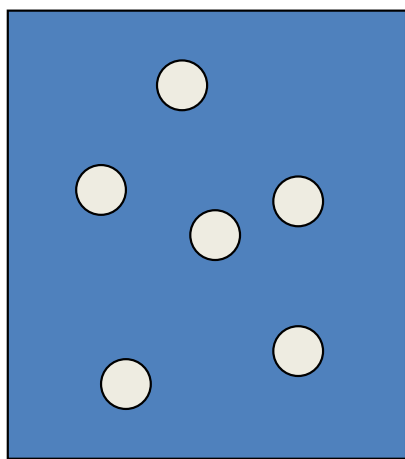


Dilutions

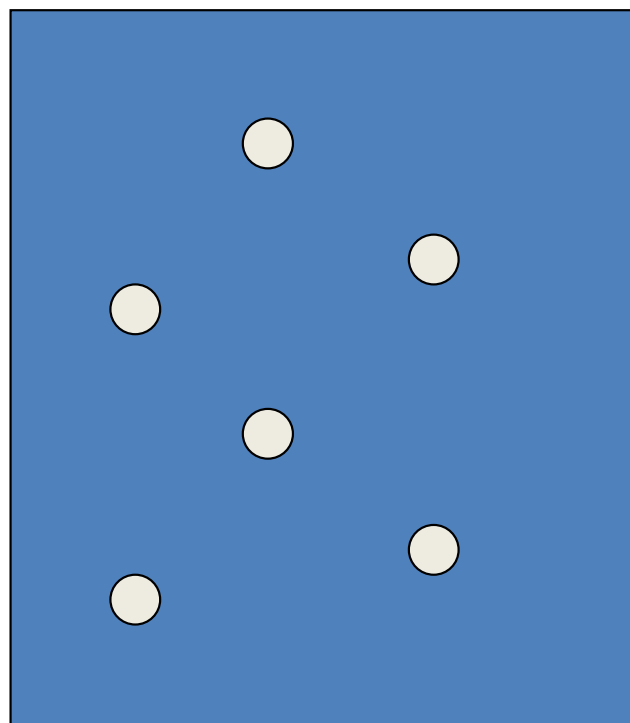
- Most chemicals are sold as stock solutions
- They are VERY concentrated (HCl 12M, H₂SO₄ 18M)



What is consistent between these two solutions?



0.60L solution, 6 moles
10 mol/L



1.2L solution, 6 moles
5 mol/L

**This Slide Has Been
Removed**

-

$$c = \frac{n}{V} \quad \text{or} \quad n = c \times V$$

- If the number of moles is the same before and after a dilution, then...

- Often concentration is written M instead of c (because it is moles/liter or M, "Molarity")

Check Your Understanding

If you wished to prepare 500 mL of 1.20 M HCl solution from a 12.0 M HCl stock bottle,

- a) How much of the stock solution would you require?
- b) Explain how you would dilute the solution.

Write out your givens and unknowns first

Given:

Unknown:

**This Slide Has Been
Removed**

Check Your Understanding

What volume of a 0.500 mol/L sodium hydroxide solution can be prepared from 10.0 mL of a 6.00 mol/L solution?

