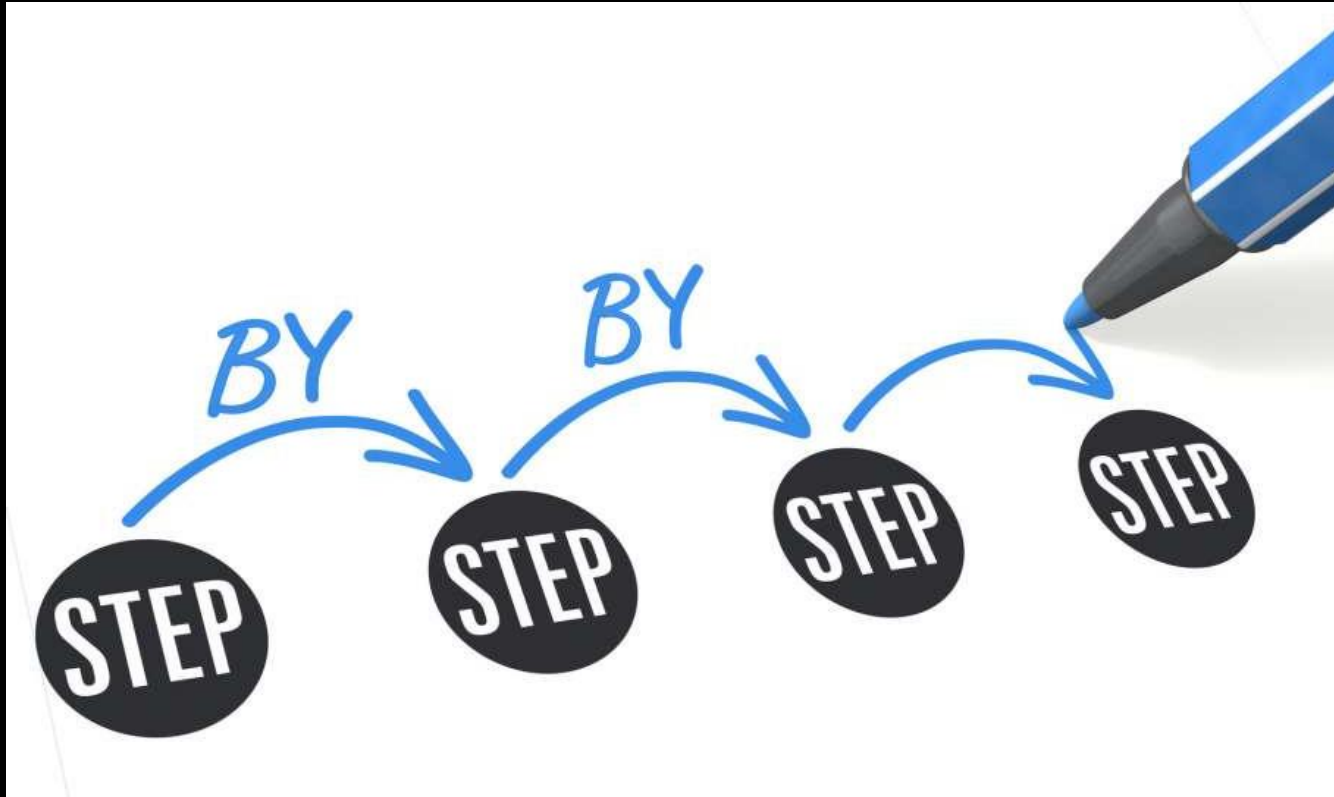


Serial Dilutions

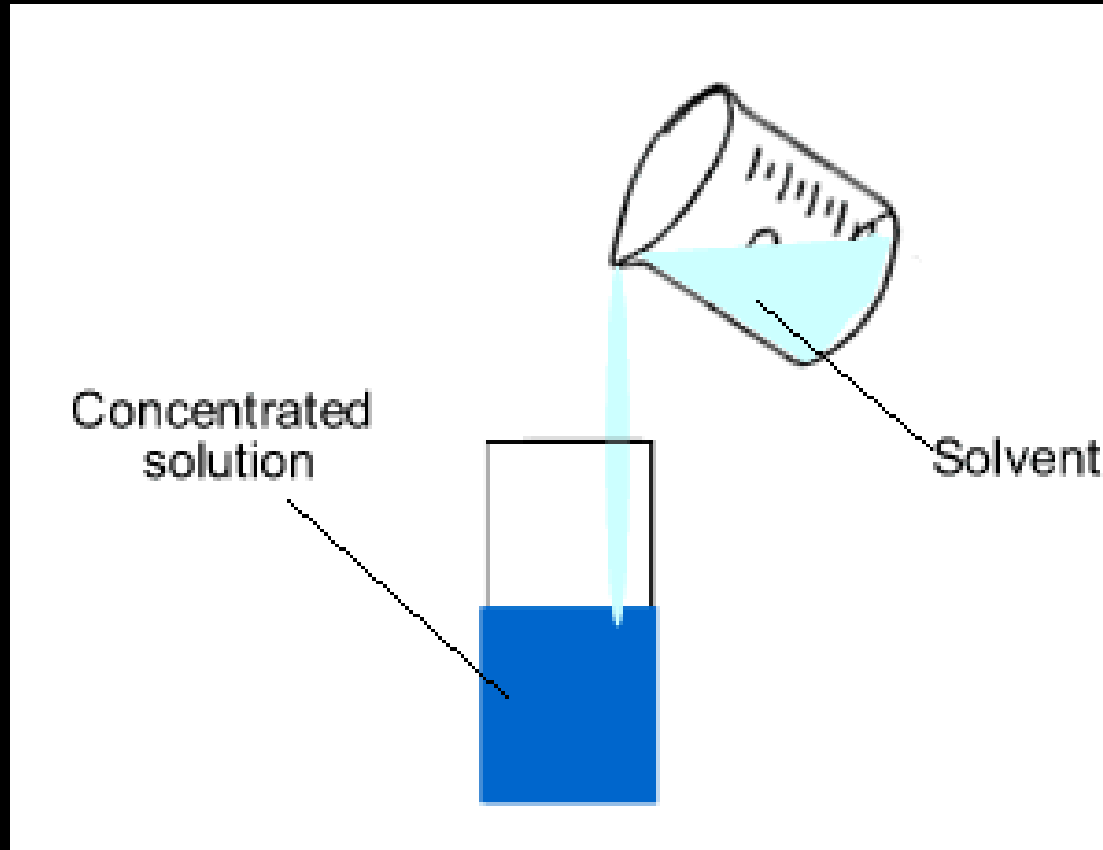


Serial



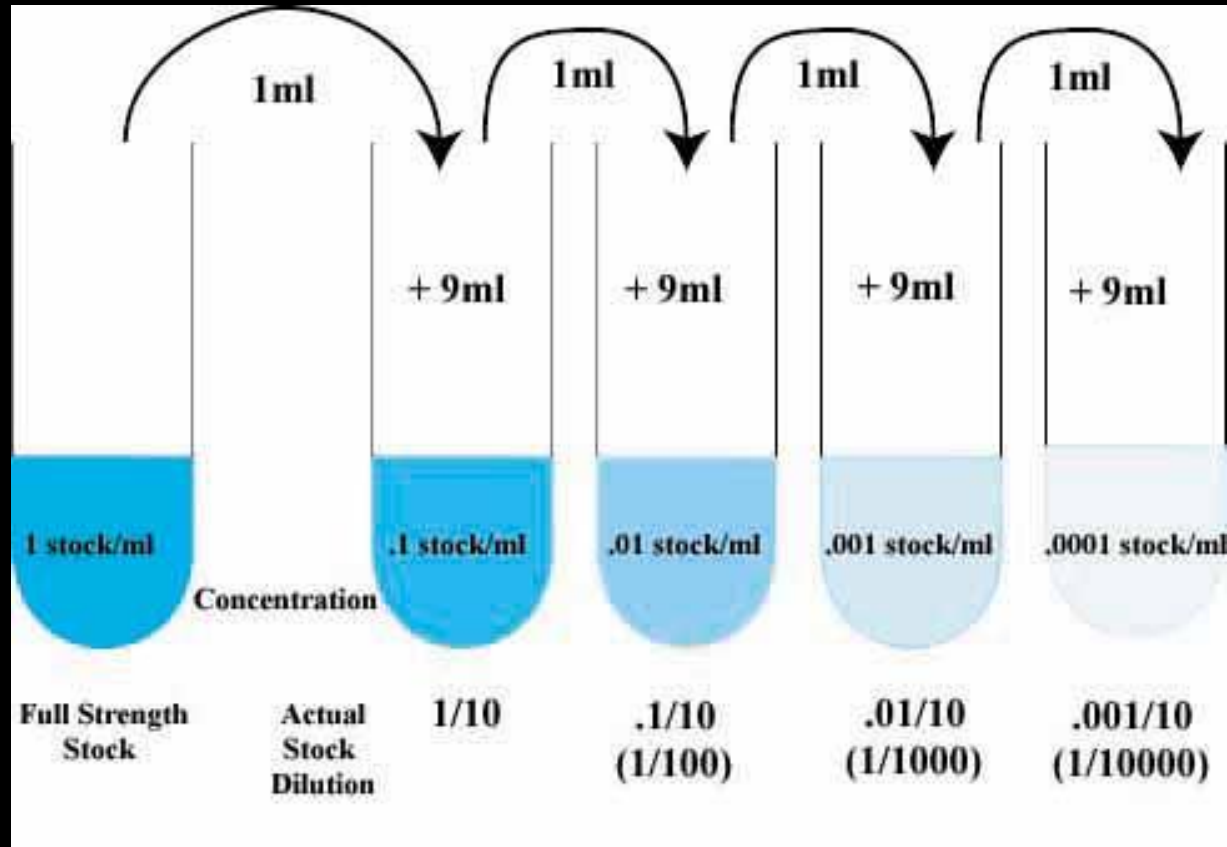
Serial - In a series, order or interval.
Measured steps.

Dilution



Dilution - Water Down

Serial Dilution



Serial dilutions - reduce the concentration of a sample in small steps or fractions.

YouTube
Serial Dilutions

Lab: Fill in the instructions as we go along. Read each step carefully.

1. Label test tubes 1, 2, 3, 4.

Lab: Fill in the instructions as we go along. Read each step carefully.

2. Add 10 mL of water to test tube 1.
3. Add 9 mL of water to test tube 2, 3 and 4
4. Add 1 drop of blue food coloring to test tube 1. (mix)

Lab: Fill in the instructions as we go along. Read each step carefully.

6. Pipette 1 mL of water from test tube 1 to test tube 2. (mix)
7. Pipette 1 mL of water from test tube 2 to test tube 3. (mix)
8. Pipette 1 mL of water from test tube 3 to test tube 4. (mix)

Post Lab Analysis

- *You will use this same procedure to dilute yeast samples to culture cells on petri dishes.*
- How could you identify the test tubes if the numbers were removed?
Darkest (1) to lightest (4)
- Hold your test tubes up to the light to see the color differences. What does dilution mean?
- *To add water; water down.*

Post Lab Analysis

- Calculate the percentage of methylene blue in each test tube. Show your work.

- 20 drops=1 mL

– Test tube #1:

What was in test tube #1?

10 mL of water= $10 \times 20 = 200$ drops

6 drops of dye

$200 + 6 = 206$ drops total in test tube #1

$$6 \div 206 \times 100 = \underline{\hspace{2cm}}\%$$

Post Lab Analysis

- Test tube #2: #1's answer $\times .10 =$ _____%
- Test tube #3: #2's answer $\times .10 =$ _____%
- Test tube #4: #3's answer $\times .03 =$ _____%