**Use the formula: C1V1=C2V2 to solve the following problems.**

Problem 1: You set up an experiment that requires a final concentration of 0.1M Tris in your tubes with a total volume of 2 ml in each tube. You have a 1 M stock solution in your laboratory. How much of the stock solution will you need in each tube?

Problem 2: You are given a solution of amylose-azure at 2 mg/ml. You want your final concentration to be 0.5mg/ml in a 5 ml reaction. How much of the stock amylose-azure solution will you use for that 5 ml reaction?

Problem 3: You have a 2 mg/ml stock solution of BSA. You use 0.2 ml of that BSA in a total volume of 1 ml. What is the final concentration of BSA?

Answers on next page…

Answers:

**Problem 1:** You set up an experiment that requires a final concentration of 0.1M Tris in your tubes with a total volume of 2 ml in each tube. You have a 1 M stock solution in your laboratory. How much of the stock solution will you need in each tube?

C1V1=C2V2

(1 M)(V1) = (.1M)(2 ml)

V1= (.1M) (2 ml)

 1 M

**V1= 0.2 ml**

**Problem 2:** You are given a solution of amylose-azure at 2 mg/ml. You want your final concentration to be 0.5mg/ml in a 5 ml reaction. How much of the stock amylose-azure solution will you use for that 5 ml reaction?

C1V1=C2V2

(2 mg/ml)(V1) = (0.5mg/ml) (5 ml)

V1= (0.5mg/ml) (5 ml)

 2 mg/ml

**V1= 1.25 ml**

Problem 3: You have a 2 mg/ml stock solution of BSA. You use 0.2 ml of that BSA in a total volume of 1 ml. What is the final concentration of BSA?

C1V1=C2V2

(0.2 ml)(2 mg/ml) = (C2) (1 ml)

C2= (0.2 ml)(2 mg/ml)

 1 ml

**C2 = 0.4 mg/ml**