

### Answer on Question #57572, Chemistry / General Chemistry

**Answer:** 25mL stock solution of glucose, 50mL stock solution of asparagine and 20mL stock solution of  $\text{NaH}_2\text{PO}_4$

#### **Solution:**

Molarity = moles solute/ volumes of solution in liters,

or  $M = n/V$

$V = 500 \text{ mL} = 0.5\text{L}$

$M_2$  (glucose) = 50mM = 0.05M

$M_1$  (glucose) = 1000mM = 1M

$n$  (glucose) =  $M \cdot V = 0.05\text{M} \cdot 0.5\text{L} = 0.025$  mole,

so you need 0.025 mole / 1M = **0.025L (25mL) stock solution of glucose**

$M_2$  (asparagine) = 10mM = 0.01M

$M_1$  (asparagine) = 100mM = 0.1M

$n$  (asparagine) =  $M \cdot V = 0.01\text{M} \cdot 0.5\text{L} = 0.005$  mole,

so you need 0.005 mole/ 0.1M = **0.05L (50mL) stock solution of asparagine**

$M_2$  ( $\text{NaH}_2\text{PO}_4$ ) = 2mM = 0.002M,

$M_1$  ( $\text{NaH}_2\text{PO}_4$ ) = 50mM = 0.05M

$n$  ( $\text{NaH}_2\text{PO}_4$ ) =  $M \cdot V = 0.002\text{M} \cdot 0.5\text{L} = 0.001$  mole,

so you need 0.001 mole / 0.05M = **0.02L (20mL) stock solution of  $\text{NaH}_2\text{PO}_4$**