

Primer Dilutions:

First dissolve fresh primer with the 10X volume as its concentration:

For eg., for 25 nmoles of primer add 250 ul of water

This will give you a concentration of 0.0001 M or 0.1 mM

$$(25 \text{ nmoles/L}) (x \text{ moles}/250 \times 10^{-6} \text{ L}) = .0001 \text{ mole/L} = 0.0001 \text{ M} = 0.1 \text{ mM}$$

To prepare primer for use:

Dilute this stock 1:10, to give a concentration of 10 μM

From this, use 1 μl in a typical PCR reaction. This will give you a final concentration of 10 pmoles in a PCR reaction.

(Because 1 μL of 10 μM = 10 $\mu\text{moles}/10^{-6} \text{ L}$ = 0.00001 $\mu\text{mole}/\mu\text{l}$ = 10 $\text{pmol}/\mu\text{l}$)