calculate the mass of 0.650 % solution that can be prepared by diluting 25.9 g of 3.00 % stock solution

Solution:

The mass concentration is calculated by the following equation: $\omega = \frac{m(solute)}{m(solution)} \cdot 100\%$. So, in 25.9 g of 3.00% solution there are m(solute)=(25.9·3)/100=0.777 g of solute. Use the mass concentration to find the mass of 0.650% solution: m(solution)= $\frac{0.777}{0.650} \cdot 100 = 119.539\,g$.

Answer:

The mass of 0.650 % solution are 119.539 g.