so, add $\frac{54\text{ g } C_6H_{12}O_6}{1{,}000\text{ ml}}$

(8) since $\frac{54\text{ g } C_6H_{12}O_6}{1{,}000\text{ ml}} = .3\text{ M GLUCOSE}$

$$\frac{54\text{g}}{1{,}000\text{ ml}} = \frac{X}{100\text{ml}}$$

$$1{,}000\,X = 5{,}400$$

$$X = \frac{5{,}400}{1{,}000} = 5.4\text{g}$$

$$\Rightarrow \frac{5.4\text{g}}{100\text{ ml}} \equiv \boxed{5.4\%}$$