58 cm cube of ethyl alcohol was dissolved in 400 cm cube of water to form 454 cm cube of solution of ethyl alcohol. Calculate percentage by volume of ethyl alcohol in water?

Solution.

Find the percentage by volume of ethyl alcohol in water:

$$c_{\%,v/v} = \frac{V_{ethyl\,alcohol}}{V_{solution}} * 100\% = \frac{58}{454} * 100\% = 12.78\%;$$

Answer: the percentage by volume of ethyl alcohol in water is **12.78%.**