Answer on the Question #67781, Chemistry / General chemistry

what is the concentration of a solution (in M) made by dissolving .981 g calcium chloride (MM= 110.98 g/mol) in a final volume 500.0 mL?

Answer:

$$c(CaCl_2) = \frac{n(CaCl_2)}{V_{solution}} = \frac{m(CaCl_2)}{M(CaCl_2) \cdot V_{solution}} = \frac{0.981\ g}{110.98\frac{g}{mol} \cdot 0.5\ L} = 0.01768\ M$$