Answer on question #60750 – Chemistry – Physical Chemistry

What is the molality of this solution?

A dilute soln is prepared by dissolving W2 g of a non-volatile and non-electrolyte solute (M.wt.=M2) in W1 g of a solvent (M.wt=M1). What is the concentration of solute in molality?

Molality – is a property of a solution and is defined as the number of moles of solute per kilogram of solvent. The SI unit for **molality** is mol/kg.

b = n(solute)/m(solvent)

$$b = \frac{W2}{M2} \Big/ \frac{W1}{1000} = \frac{1000 * W2}{M2 * W1} m \, (\frac{mol}{kg})$$

Answer: b = 1000*W2/(M2*W1) m