

How would you prepare a solution S of potassium iodide with a mass concentration of 8.4g.l⁻¹ in v=250ml? What is the molar concentration C of the solution?

Solution:

$$m(\text{KI})(\text{g}) = 8.4 \cdot 250 / 1000 = 2.1$$

$$C = \frac{n}{V} = \frac{m}{MV}$$

$$C(\text{mole/l}) = 2.1 / (166 \cdot 0.25) = 0.0506$$

Answer: 2.1 g of KI; C = 0.0506 M