

Answer on Question#47644 Chemistry – Physical Chemistry

How many water molecules are in a block of ice containing 2.50mol of water (H₂O)?
Express the number of molecules numerically.

Solution

$N(\text{H}_2\text{O}) = n(\text{H}_2\text{O}) \cdot N_A = 2,50 \text{ mole} \cdot 6,02 \cdot 10^{23} \text{ mole}^{-1} = 1,505 \cdot 10^{24}$ - the number of molecules.

Answer: $1,505 \cdot 10^{24}$.