

Answer on Question #77569, Chemistry / General Chemistry

Calculate the number of moles of gas present in a sample whose volume is 1.00 L at a pressure of 745mm Hg, and a temperature 93.0 C. Use the Ideal gas law. $R=0.0821$ L atm/K mol

Solution

The ideal gas law says:

$$PV=nRT, \text{ where } T = 366 \text{ K}, P = \frac{745}{760} = 0.98 \text{ atm}$$

$$n = \frac{PV}{RT} = \frac{0.98 \times 1}{366 \times 0.0821} = \mathbf{0.0326 \text{ (mol)}}$$

Answer

Sample contains **0.0326 mol** of gas.

Answer provided by AssignmentExpert.com