#65487 Chemistry, Other

A mixture of gases with a total of pressure of 100 ATM is 75% N_2 and 25% O_2 what is the gas pressure of N_2 gas in this mixture.

Answer:

Dalton's Law of Partial Pressures states that the total pressure in a gas mixture is the sum of the partial pressures of each individual gas.

$$P_{total} = P_{gas\ a} + P_{gas\ b} + P_{gas\ c} + etc$$

Therefore,

$$P\ (N_2) = 100 \cdot 0.75 = 74\ ATM$$