Air N_2, O_2, Ar

$$n_{N_2} + n_{O_2} + n_{Ar} = n_{total}$$

Mole percent

$$\frac{Part}{total} \times 100 = \frac{mol\ N_2}{mol\ total} \times 100$$

$$P_{N_2} + P_{O_2} + P_{Ar} = P_{total}$$ (Dalton's Law)

Mole Fraction

$$\frac{Mol\ N_2}{mol\ total} = \frac{P_{N_2}}{P_{Total}} \Rightarrow P_{N_2} = \left(\frac{Mol\ N_2}{mol\ total}\right) \cdot P_{total}$$

$$P_{N_2} V = n_{N_2} R T$$

$$P_{total} V = n_{total} R T$$

% comp	78% N_2	21% O_2	1% Ar+
fractions	0.78	0.21	0.01

today Airport = 1.006 atm

$P_{N_2} = (0.78)\ 1.006\ atm = 0.785\ atm$

$P_{O_2} = (0.21)\ 1.006\ atm = 0.211\ atm$

$P_{Ar} = (0.01)\ 1.006\ atm = 0.010\ atm$