Chemistry 30S

Formulas

$^{\circ}C = K - 273$

$K = {}^{\circ}C + 273$

$\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$

$\%\ composition = \frac{m_{element}}{m_{compound}} \times 100\%$

$\%\ yield = \frac{actual}{theoretical} \times 100\%$

$C_1V_1 = C_2V_2$

$Density_{(gas)} = \frac{m_R}{m_V}$

$n = \frac{m}{m_R}$

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

$n = \frac{\#\ of\ particles}{N_A}$

$n = \frac{V}{m_V}$

Constants

$1\ atm = 101.3\ kPa$

$1\ atm = 760\ mm\ Hg$

$1\ kPa = 10\ mb$

$N_A = 6.02 \times 10^{23}$

$1\ mole\ of\ gas = 22.4\ L\ @\ STP$