

mólová hmotnosť látky L (hmotnosť $m_L$ na 1 mól)	$M_L$	kg mol <sup>-1</sup>
mólový objem látky L (objem $V_L$ na 1 mól)	$V_{m,L}$	m <sup>3</sup> mol <sup>-1</sup>
Avogadrova konšanta (počet častic $N_L$ na 1 mól)	$N_A = 6,02214076 \cdot 10^{23} \text{ mol}^{-1}$ (presne)	mol <sup>-1</sup>
látkové množstvo látky L	$n_L = \frac{m_L}{M_L} = \frac{V_L}{V_{m,L}} = \frac{N_L}{N_A}$	mol
hustota čistej látky L	$\rho_L = \frac{m_L}{V_L}$	kg m <sup>-3</sup>
hmotnosť jednej častice	$m_{1L} = \frac{m_L}{N_L} = \frac{M_L}{N_A}$	kg
atómová hmotnostná jednotka	$u = 1,66053906660 \cdot 10^{-27} \text{ kg}$	kg
hustota zmesi	$\rho' = \frac{m'}{V'}$	kg m <sup>-3</sup>
hmotnostný zlomok látky L v zmesi	$w_L = \frac{m_L}{m'} \quad \sum_i w_i = 1$	1
objemový zlomok látky L v zmesi	$\phi_L = \frac{V_L}{V'} \quad \sum_i \phi_i = 1$ *	1
mólový zlomok látky L v zmesi	$x_L = \frac{n_L}{n'} \quad \sum_i x_i = 1$	1
hmotnostná koncentrácia látky L v zmesi	$\underline{\rho}_L = \frac{m_L}{V'} \quad \sum_i \underline{\rho}_i = \rho'$	kg m <sup>-3</sup>
látková koncentrácia (molarita) látky L v zmesi	$c_L = \frac{n_L}{V'}$	mol m <sup>-3</sup> , mol dm <sup>-3</sup> ≡ M
molalita látky L v zmesi	$\underline{m}_L \equiv b_L = \frac{n_L}{m_S}$ ** $\underline{m}_S \equiv b_S = \frac{n_S}{m_S} = \frac{1}{M_S}$	mol kg <sup>-1</sup>

štandardné podmienky	$p^\theta = 10^5 \text{ Pa}, T^\theta = 298,15 \text{ K}$	
štandardný mólový objem ideálneho plynu L	$V_{m,L(g)}^\theta = 24,78957 \text{ dm}^3 \text{ mol}^{-1}$	m <sup>3</sup> mol <sup>-1</sup>
univerzálna plynová konšanta	$R = 8,31446261815324 \text{ J mol}^{-1} \text{ K}^{-1}$	J mol <sup>-1</sup> K <sup>-1</sup>
stavová rovnica ideálneho plynu L	$p_L V_L = n_L R T_L$	Pa, m <sup>3</sup> , mol, J, K
priemerná mólova hmotnosť zmesi	$\bar{M} = \frac{\sum_i x_i M_i}{\sum_i x_i} = \sum_i (x_i M_i)$	
	$\bar{M} = \frac{\sum_i w_i}{\sum_i \left( \frac{w_i}{M_i} \right)} = \frac{1}{\sum_i \left( \frac{w_i}{M_i} \right)}$	
	$\bar{M} = \frac{\sum_i c_i M_i}{\sum_i c_i}$	
	$\bar{M} = \frac{\sum_i \underline{\rho}_i}{\sum_i \left( \frac{\underline{\rho}_i}{M_i} \right)} = \frac{\rho'}{\sum_i \left( \frac{\underline{\rho}_i}{M_i} \right)}$	kg mol <sup>-1</sup>
	$\bar{M} = \frac{\sum_i \phi_i \rho_i}{\sum_i \left( \frac{\phi_i \rho_i}{M_i} \right)} = \frac{\rho'}{\sum_i \left( \frac{\phi_i \rho_i}{M_i} \right)}$	
	$\bar{M} = \frac{\sum_i \underline{m}_i M_i}{\sum_i \underline{m}_i}$	
rozsah chemickej reakcie	$d\xi = \frac{dn_L}{V_L} \Leftrightarrow \Delta\xi = \frac{\Delta n_L}{V_L}$ ***	mol

\* platí len pre ideálne zmiešavanie, tj. keď  $\Sigma V_i = V'$ .

\*\* L = Látka, ktorej sa veličina týka, S = rozpúšťadlo (Solvent).

\*\*\*  $v_L$  = stechiometrický koeficient látky L je pre reaktanty záporný, pre produkty kladný.

	$w_L$	$\varphi_L$	$x_L$	$\underline{\rho}_L$	$c_L$	$\underline{m}_L$
$w_L =$	$=$	$w_L = \frac{\varphi_L \rho_L}{\sum_i (\varphi_i \rho_i)}$ $w_L = \frac{\varphi_L \rho_L}{\rho'}$	$w_L = \frac{x_L M_L}{\sum_i (x_i M_i)}$ $w_L = \frac{x_L M_L}{\bar{M}}$	$w_L = \frac{\underline{\rho}_L}{\rho'}$	$w_L = \frac{c_L M_L}{\rho'}$	$w_L = \frac{\underline{m}_L M_L}{\sum_i (\underline{m}_i M_i)}$ $w_L = \frac{\underline{m}_L M_L}{\bar{M} \sum \underline{m}_i}$ $\underline{m}_S = \frac{1}{M_S}$
$\varphi_L =$	$\varphi_L = \frac{w_L \rho'}{\rho_L}$	$=$	$\varphi_L = \frac{x_L M_L \rho'}{\rho_L \sum_i (x_i M_i)}$ $\varphi_L = \frac{x_L M_L \rho'}{\rho_L \bar{M}}$	$\varphi_L = \frac{\rho_L}{\rho_L}$	$\varphi_L = \frac{c_L M_L}{\rho_L}$	$\varphi_L = \frac{\underline{m}_L M_L \rho'}{\rho_L \sum_i (\underline{m}_i M_i)}$ $\varphi_L = \frac{\underline{m}_L M_L \rho'}{\rho_L \bar{M} \sum \underline{m}_i}$
$x_L =$	$x_L = \frac{w_L}{M_L \sum_i \left( \frac{w_i}{M_i} \right)}$ $x_L = \frac{w_L \bar{M}}{M_L}$	$x_L = \frac{\varphi_L \rho_L}{M_L \sum_i \left( \frac{\varphi_i \rho_i}{M_i} \right)}$ $x_L = \frac{\varphi_L \rho_L \bar{M}}{M_L \rho'}$	$=$	$x_L = \frac{\underline{\rho}_L}{M_L \sum_i \left( \frac{\underline{\rho}_i}{M_i} \right)}$ $x_L = \frac{\underline{\rho}_L \bar{M}}{\rho' M_L}$	$x_L = \frac{c_L}{\sum_i c_i}$	$x_L = \frac{\underline{m}_L}{\sum_i \underline{m}_i}$
$\underline{\rho}_L =$	$\underline{\rho}_L = w_L \rho'$	$\underline{\rho}_L = \varphi_L \rho_L$	$\underline{\rho}_L = \frac{x_L M_L \rho'}{\sum_i (x_i M_i)}$ $\underline{\rho}_L = \frac{x_L M_L \rho'}{\bar{M}}$	$=$	$\underline{\rho}_L = c_L M_L$	$\underline{\rho}_L = \underline{m}_L M_L \rho_S$
$c_L =$	$c_L = \frac{w_L \rho'}{M_L}$	$c_L = \frac{\varphi_L \rho_L}{M_L}$	$c_L = \frac{x_L \rho'}{\sum_i (x_i M_i)}$ $c_L = \frac{x_L \rho'}{\bar{M}}$	$c_L = \frac{\rho_L}{M_L}$	$=$	$c_L = \frac{\underline{m}_L \rho'}{\sum_i (\underline{m}_i M_i)}$ $c_L = \frac{\underline{m}_L \rho'}{\bar{M} \sum \underline{m}_i}$
$\underline{m}_L =$	$\underline{m}_L = \frac{w_L}{M_L w_S}$	$\underline{m}_L = \frac{\varphi_L \rho_L}{M_L \varphi_S \rho_S}$	$\underline{m}_L = \frac{x_L}{M_S x_S}$	$\underline{m}_L = \frac{\rho_L}{M_L \underline{\rho}_S}$	$\underline{m}_L = \frac{c_L}{\rho' - \sum_{i \neq S} (c_i M_i)}$	$=$

L = Látka, ktorej sa veličina týka, S = rozpúšťadlo (Solvent).