

**activity coefficient,  $f$ ,  $\gamma$** 

The activity coefficient  $f_B$  of a substance B in a liquid or solid mixture containing mole fractions  $x_B$ ,  $x_C$ , ... of the substances B, C, ... is a dimensionless quantity defined in terms of the chemical potential  $\mu_B$  of B in the mixture by:

$$RT \ln (x_B f_B) = \mu_B (\text{cd}, T, P, x) - \mu_B^* (\text{cd}, T, p)$$

where  $x$  denotes the set of mole fractions  $x_B$ ,  $x_C$ , ... .

The activity coefficient  $\gamma_B$  of a solute B in a solution (especially a dilute liquid solution) containing molalities  $m_B$ ,  $m_C$ , ... of solutes B, C, ... in a solvent A is a dimensionless quantity defined in terms of the chemical potential  $\mu_B$  by:

$$RT \ln (m_B \gamma_B / m^\ominus) =$$

$$\mu_B - \{\mu_B - RT \ln (m_B / m^\ominus)\}^\infty$$

1994, 66, 543; 1994, 66, 546; 1990, 62, 2171; 1996, 68, 960