

mean activity of an electrolyte in solution

Defined by the equation:

$$a_{\pm} = \exp[(\mu_{\text{B}} - \mu_{\text{B}}^{\ominus})\nu RT]$$

where μ_{B} is the *chemical potential* of the solute B in a solution containing B and other species. The nature of B must be clearly stated: it is taken as a group of ions of two kinds carrying an equal number of positive and negative charges, e.g. $\text{Na}^+ + \text{NO}_3^-$ or $\text{Ba}^{2+} + 2\text{Cl}^-$ or $2\text{Al}^{3+} + 3\text{SO}_4^{2-}$. ν is the total number of ions making up the group i.e. 2, 3 and 5 respectively in the above examples. μ_{B}^{\ominus} is the chemical potential of B in its standard state, usually the hypothetical ideal solution of concentration 1 mol kg^{-1} and at the same temperature and pressure as the solution under consideration.

See also *activity*.

1974, 37, 510