

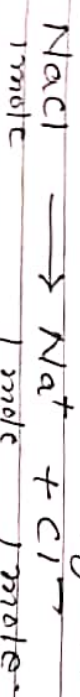
Abnormal molar mass (van't Hoff factor):

In case of dissociation and association of solute particles in solution, the experimental value of molar mass of solute is observed to be higher than its normal value or lower or higher than its normal value. This is called abnormal molar mass. Colligative properties depend upon the total number of solute particles present in a given volume of the solution. Colligative properties do not depend upon the composition, structure and nature of the solute particles. When a solute dissociates or associates in the solution, the number of particles are changed. Therefore, in such cases abnormal results of colligative properties are obtained.

In case of dissociation:

When solute is an electrolyte, it dissociates to give ions. The number of particles are changed in the solution are increased. Due to the increase in the number of solute particles in the solution, the observed (experimental) value of colligative properties is higher than expected.

Since molar mass \propto colligative property.



1 mole NaCl give two mole, so normal molar mass of NaCl = 58.5
abnormal molar mass of NaCl = 58.5

