

magnitude of that quantity in the case of water. .

Finally, surface tension is of great importance, indeed in simple cases is the one effective agent, in the phenomenon called adsorption.<sup>1</sup> On the basis of thermodynamical considerations first developed by Willard Gibbs, it is easy to show that whenever the dissolution of a substance changes the surface tension of a solvent, the distribution of the dissolved substance will not be strictly homogeneous. If the solution has a lower surface tension than the solvent, the surface of the solution will become more concentrated than the interior; or if the surface tension of the solution be greater than that of the solvent, the surface of the solution will become less concentrated than the interior. This result, quite insignificant in simple solutions, becomes a matter of much moment when, as in the case of suspensions of fine particles like animal charcoal, in emulsions, jellies, or any other system of like disperse heterogeneity of physical constitution, there occurs very great increase of surface area. Then it is

<sup>1</sup> A familiar example of adsorption is the use of bone-black to decolorize sirup in the process of sugar refining. The colored matters are almost completely removed from solution, and cling to the surface of the charcoal.