PECULIARITY OF DISPERSE MINERAL WETTING
BY SUCROSE SOLUTIONS

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Wetting of porous bodies plays an important role in technological processes such as, impregnation of porous materials by various solutions and compounds, clearing of fabrics and other materials from dirt, intensification of oil and gas extraction etc. The wetting of disperse minerals is one of the important characteristics, which lets to estimate intensity of interaction of a surface of a disperse phase with liquids, making disperseional matter. We had spent systematic researches of wetting processes and of capillary impregnation some disperse minerals of Ukraine by water and sugar solutions. Is established that the capillary impregnation of mineral powders is well described by equations of liquid capillary rise, deduced for separate capillaries. The impregnation of mineral dispersions is carried out in two stages. On first there is the filling of macro- and mesopores, formed between separate particles and their aggregations, and on second - diffusional penetration of a liquid in mineral micropores. At impregnation by sugar solutions is established, that at the first stage of this process adsorption of water and some of sucrose is observed, therefore the concentration of an initial solution is increased. At the second stage water is adsorbed only. Thus, in thin pores of disperse minerals does not occur adsorption of sucrose and exists some unsolved volume. At impregnation of minerals dispersions by the sugar solutions have found out increase of a liquid quantity, which can be adsorbed in comparison with impregnation by water. On the basis of received data a hypothesis about influence raised of osmotic pressure of a sucrose solution is offered, therefore occurs deaggregation of disperse particles and increase of interpartial space.