

Analytical dimensioning the region of structuring interaction of the charged oxo-olic clusters

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Abstract

In some region of gel area there have been partialled out oxyhydrate clusters not interacting with gel media (these are large macromolecular formations which practically do not move in the space, that is, they have retarded diffusion), as well as the colloidal clusters which interact intensively with the media and with each other. This interaction is realized either through conformer motion of the gel macro-formations or processes, for example, polymerization-peptization ones or close to them owing to dynamic phenomena of collapsing or "breaking" double diffusion layer (DDL) macromolecules with the blowout to the disperse media, e.g. mobile nano-clusters, and creation of new stabilized DDL of other volume. Thus it is possible to calculate the half-size of the region of pulsing noise structuring nano-clusters – it is

$$L = \frac{\pi}{4} \sqrt{\frac{D}{\alpha}}.$$

In this relation α has the dimension of frequency.