

Biomineral composites of the human body: theory, practice, prospects

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Abstract

Structurally-textural features of investigated pathogenic units are studied. It is shown that in process stone formation the structure of physiological solutions undergoes essential, often periodic, changes that is shown in multistaging of stones, their microheterogeneity, ash value and in variable structure of the majority of pathogenic biominerals. Diagrams of solubility of the basic phases of nephroliths and their double systems with the general cation or anion are calculated at 25 °C. Laws formation in conditions, characteristic for urine of the healthy person are experimentally studied. Adequacy of results of theoretical and experimental modeling to processes pathogenic mineralogical formation in a human body is analysed. Borders of applicability of thermodynamic model for their description are specified.