

Properties of magnetosomes suspension under the influence of magnetic field

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For medical applications nanoparticles require highly biocompatible particle surfaces. Biogenic magnetoparticles such as bacterial magnetosome particles are organelles consisting of magnetite crystals enclosed by a phospholipid membrane that offers a high degree of biocompatibility. Isolated magnetosome particles form stable, well-dispersed suspensions in water solution of HEPES. The objective of the work is to study the influence of magnetic field on rheological and acoustic properties of magnetosomes suspension. The experimental results showed a clear effect of the magnetic field on acoustic parameters: propagation velocity and attenuation of ultrasonic wave and the viscosity of the suspension, which are the result of magnetosomes aggregation.

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