Название публикации:

Studying bone substitute biodegradable polymer materials by means of acoustic microscopy

Авторы:

Petronyuk, Y.a,b, Levin, V.a, Gorshenev, V.a, Olkhov, A.c,d, Muraev, A.e, Khramtsova, E.a, Morokov, E.a

a. N.M. Emanuel Institute of Biochemical Physics, RAS, 4 Kosygin st., Moscow, Russian Federation
b. Scientific and Technological Center of Unique Instrumentation, RAS, 15 Butlerov st., Moscow, Russian Federation
c. N.N. Semenov Institute of Chemical Physics, RAS, 4/1 Kosygin st., Moscow, Russian Federation
d. G.V. Plekhanov Russian University of Economics, 36 Stremyanny lane, Moscow, Russian Federation
e. Nizhny Novgorod State Medical Academy, 10/1Minina Sq., Nizhny Novgorod, Russian Federation

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Аннотация:

Using pulse acoustic microscopy the samples of bone-substitute biodegradable polymer materials were examined. It was shown at frequency range of 50-100 MHz the method is a powerful non-destructive instrument to study internal microstructure morphology and to characterize elastic property of biomaterials. Microstructure of polylactide and polyhydroxybutyrate polymer samples in the form of plates, films and non-woven fabrics were investigated. It was shown that the heating/cooling variations in technological regime affect the structure of the polymer components. The processes of porous formation for the studied biomaterials were studied by means of acoustic microscopy techniques.

Ключевые слова:

acoustic microscopy, biodegradable polymers, composite materials, mechanical characteristics, polylactide