

21st European Biotechnology Congress

October 11-12, 2018 | Moscow, Russia

Application of the standardized form magnetite nanoparticles (ICNB) in creature simple and practical method of additive modernization of preservation solutions for red blood cells

Andrey Belousov

Kharkov Medical Academy of Postgraduate Education, Ukraine

This study was devoted to the learning of the use of nanotechnology to correct the functional activity of red blood cells (RBCs) at the storage stages at a positive temperature. It was established that saline NaCl which had previously been processed by magnetite nanoparticles (ICNB) had a marked membrane-stabilizing effect, inhibits hemolysis and increasing the sedimentation stability of preserved RBCs. The complex analysis of the obtained data allowed to determine the primary mechanisms effect of the saline NaCl which had previously been processed by ICNB on the preserved RBCs. The proposed method of additive modernization of preserved RBCs was adapted to the production process. The optimisation results were obtained in creating a simple and practical method of additive modernization of preservation solution that does not violate the compliance requirements, improves the quality, efficiency and safety transfusion of RBCs.

an.belousov2012@ukr.net