

Accepted Manuscript

Title: Synthesis and characterization of polyglycerol coated superparamagnetic iron oxide nanoparticles and cytotoxicity evaluation on normal human cell lines

Authors: Ahmad Ghasemi, Salman Jafari, Jafar saeidi, Mahnaz mohtashami, Iraj Salehi



PII: S0927-7757(18)30357-1
DOI: <https://doi.org/10.1016/j.colsurfa.2018.05.003>
Reference: COLSUA 22470

To appear in: *Colloids and Surfaces A: Physicochem. Eng. Aspects*

Received date: 25-1-2018
Revised date: 27-3-2018
Accepted date: 1-5-2018

Please cite this article as: Ghasemi A, Jafari S, saeidi J, mohtashami M, Salehi I, Synthesis and characterization of polyglycerol coated superparamagnetic iron oxide nanoparticles and cytotoxicity evaluation on normal human cell lines, *Colloids and Surfaces A: Physicochemical and Engineering Aspects* (2018), <https://doi.org/10.1016/j.colsurfa.2018.05.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Synthesis and characterization of polyglycerol coated superparamagnetic iron oxide nanoparticles and cytotoxicity evaluation on normal human cell lines

Ahmad Ghasemi¹, Salman Jafari^{2,*}, Jafar saeidi³, Mahnaz mohtashami⁴, Iraj Salehi⁵

¹Department Of Basic Medical Sciences, Neyshabur University Of Medical Sciences, Neyshabur, , Iran

²Department Of Radiology technology, School of Paramedicine, Hamadan University of Medical Sciences, Hamadan, Iran

³Department Of physiology, school of basic science, Neyshabur Branch, Islamic Azad University, Neyshabur, , Iran

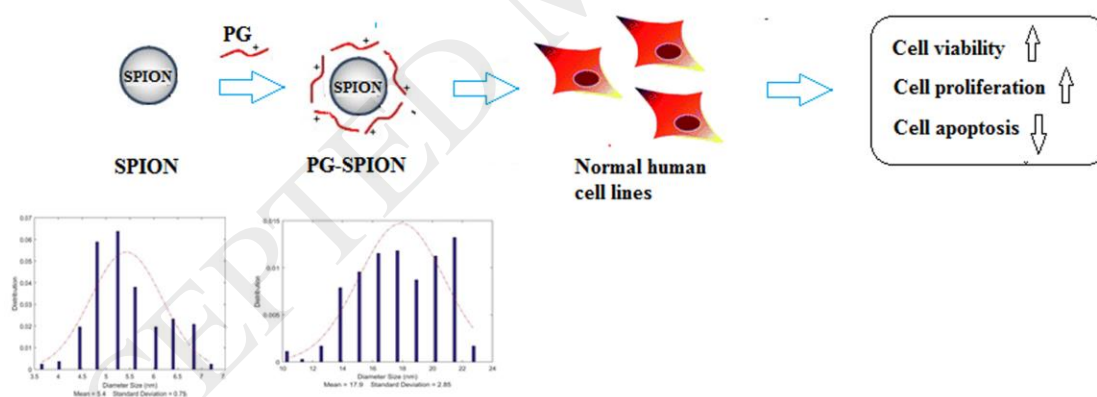
⁴Department Of biology, school of basic science, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran

⁵Neurophysiology Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

* **Corresponding author:** Salman Jafari, PhD, Assistance professor of medical physics

Email addresses: sa.jafari@umsha.ac.ir, Fax: +98- 8138381014

Graphical abstract



Abstract

Superparamagnetic iron oxide nanoparticles (SPIONs) are considered as interesting nano-carriers for cancer detection and treatment. As promising reagents for biomedical applications they need surface modifications and polyglycerol has shown suitable characteristics as a coating agent in this regard. Synthesis and characterization of SPIONs and polyglycerol coated SPIONs (PG-SPIONs) as well as evaluation of cytotoxic effects on normal human cell lines (HEK293 and MCF10A) was the aim of present study. The effect of SPIONs and PG-SPIONs on these cell lines was evaluated by measuring the cell viability, apoptosis,

Download English Version:

<https://daneshyari.com/en/article/6977358>

Download Persian Version:

<https://daneshyari.com/article/6977358>

[Daneshyari.com](https://daneshyari.com)