



## Carboxymethylcellulose film-implant contained silver nanoparticles for the treatment of burns

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### Abstract:

Silver nanoparticles inhibit the activity of the enzyme providing oxygen exchange in protozoa, such as pathogenic bacteria, viruses, and fungi (about 700 species of pathogenic flora and fauna) [1]. The transition from the ionic  $Ag^+$  form to metallic nanoclusters makes it possible to reduce silver's toxicity to cells of higher organisms without suppression of the antimicrobial activity against pathogenic microflora. Silver nanoparticles, especially stabilized ones, have greater stability and prolonged action [2]. Sodium-carboxymethylcellulose (Na-CMC) - a water-soluble film forming biodegradable polymer widely used in the production of oral pharmaceuticals and drugs for external use primarily to increase the viscosities of ointments, in the production of pastes as hydrogel bases, and in the production of drugs for parenteral use - is of high interest as a stabilizer of silver nanoparticles. In addition, Na-CMC is utilized as a binding and disintegrating agent in the production of tablets. Na-CMC is one of the key components of adhesive absorbing systems employed to treat problematic wounds, to remove extravasates, sweat, and the contents of wounds, and to regulate the kinetics of release of active substances of systems contacting mucous membranes

### Biography:

Khaydar Yunusov has completed his Doctoral degree at the age of 25 years from Institute of Polymer Chemistry



and Physics Uzbekistan Academy of Science, He is expert on the field of polymer chemistry, cellulose chemistry and technology, nanochemistry and nanotechnology. He is the Manager of scientific projects at the Institute of Polymer Chemistry and Physics Uzbekistan Academy of Science. He has published more than 95 papers in reputed journals

### Recent Publications:

- Khaydar Yunusov , Reg Anesth Pain Med. 2020
- Khaydar Yunusov , J Pain Symptom Manage. 2020
- Khaydar Yunusov , Paediatr Anaesth. 2015
- Khaydar Yunusov, Acta Crystallogr Sect E Struct Rep Online. 2010
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