

NANO CRYSTALLIN SILVER-CARBON.

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ABSTRACT:- The properties of nano crystalline silver products and examines on the internal relation between silver and carbon particles. Nano crystalline utilizes nano technology to release nano crystalline silver crystals. Nano crystalline releases 60 times less silver cations than silver – carbon interaction in between strongly. Silver impregnated fast releases dressings release minute concentrations of silver which are quickly bound up by the chloride in the wound exudates. The silver and carbon ions are bounded in the crystalline the action of silver wounds exhibited in the higher level of panel. While extrapolations from in animal studies are cautious, evidence from these studies suggests nano crystalline is effective against most common strains of wound pathogens. Can be used as protective covering over skin grafts and the protect from the burned skin. Quality human clinical trials into nano crystalline silver-carbon are few. Further clinical research, preferably randomized controlled trials into nanocrystallin silver – carbon technology.

KEYWORDS: - Nano crystalline, silver-carbon interaction, Burns, Wounds.

INTRADUCTION:-

Nano crystalline silver carbon interaction in the crystals silver impregnated very fast releases. So silver and carbon both are released from the impregnated very slow. The carbon atom bounded in the crystal at the same time silver atom does not bounded in the crystal because two atoms are at the same time does not bounded in the crystal. So the in nano material silver and carbon ions are interaction in specific unit cell. However inherent draw back Of carbon material is their excellent biocompatibility with bacteria. Finally nano crystalline silver carbon used in clinical research preferably randomized controlled trials into nano crystalline silver carbon.

However, a few problems have been pointed out with these approaches. High temperatures cause silver particles to coalesce and form large particles with inferior antibacte-

rial activities. When used for water purification, additional treatment, such as chemical disinfection, is often necessary to reduce microbe levels in activated carbon treated water. Severe attrition of silver particles deteriorates the antibacterial efficacy and may potentially cause cosmetic effect like “Argyria” related to silver ingestion. Moreover, these processes require expensive and cumbersome high vacuum equipments.

Synthesis of activated silver:-

In a typical experiment activated carbon (50 g) was subjected to a vacuum impregnation treatment in the synthesized silver nanoparticle hydrosol calculated to contain 0.75% (w/w) of silver. To ensure saturation coverage soaking was done overnight. Activated carbon was then filtered out. The colorless filtrate indicated the deposition of Ag nanoparticles on the carbon matrix. The material was washed several times with distilled water to remove water-soluble substances and free silver particles, and finally dried under reduced pressure. The activated carbon sample thus supported with silver nanoparticle was arbitrarily named AgC.

Characterization of activated carbon:-

An Anton Paar Electro kinetic Analyzer with a cylindrical flow cell having an I.D. of 2.0 cm and a packed length of 4.0 cm was used to determine the zeta potentials of the AC samples. 10×10^{-3} M KCl (pH 7.5) was used as the electrolyte. Computation of zeta potential was done as described previously. To determine the resulting silver content the modified samples were, first, ashed at 900 C in atmosphere, and then the resulting ashes were dissolved in 75 ml of 40% subsequently the solution was quantitatively analyzed by inductively coupled plasma (ICP) atomic emission spectroscopy (AES) (Optima-4300 DV; Perkin Elmer SCIEX).

RESULT:-

Nano crystalline silver – carbon used in clinical surgery (burning skin) and in metallic compounds.