



THE USE OF ACTIVATED MERCURY IN MEDICINE

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ABSTRACT

To study the beneficial and harmful properties of activated pistachio charcoal, to study whether taking activated pistachio charcoal can give good results in the treatment of poisoning with heavy metal salts, food poisoning, as well as severe infectious diseases such as dysentery, cholera, typhoid fever.

Method and methods. Since ancient times, various sorbents for medicinal purposes (Sorption (from the Latin “sorbeo”) comes from the word “swallow”, which means. Sorption is called sorption. According to the mechanism of sorption, it is divided into adsorption, absorption, hemosorption and capillary condensation) [1]. Taking pistachio charcoal powder has given good results in the treatment of poisoning with heavy metal salts, food poisoning, as well as severe infectious diseases such as dysentery, cholera, and typhoid fever. In addition, pistachio charcoal has been beneficial in the treatment of chronic gastritis, prolonged colitis, increased acidity of gastric juice, and severe forms of diarrhea (diarrhea). It was first synthesized by Nikolai Dmitrievich Zelinsky in 1915 and used as an anti-tuberculosis gas in a universal chemical preservative, and later as a catalyst (if acetylene is passed through activated pistachio carbon at 450 °C, it forms benzene, trimerylation).

Aromatic substances are absorbed slightly better than aliphatic substances in activated pistachio carbon [2-6].

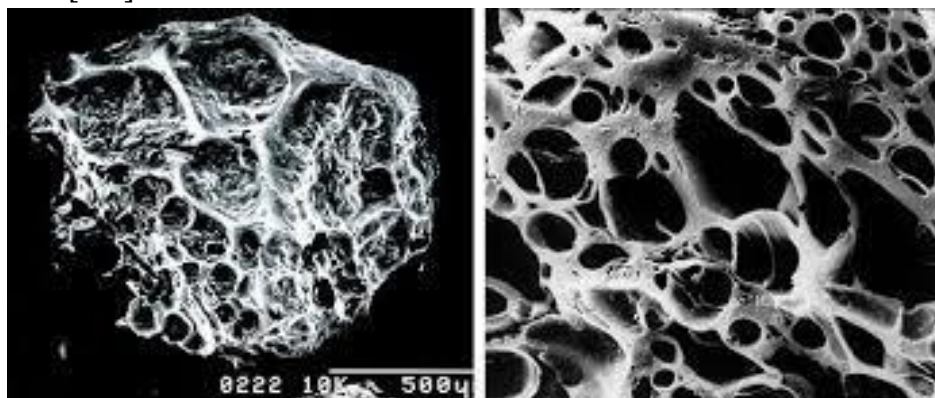


Fig. 1 Pores of activated carbon under an electron microscope

To evaluate activated carbon, pay attention to its main characteristics:



Sorption capacity, mg/g. Strength, %. Total internal surface according to BET, m^2/g .

Bulk density, g/cm^3 . Particle size, mm .

Possibility of coal regeneration.

Activated pistachio charcoal, peat, pistachio charcoal and other plant materials are used to produce pistachio charcoal, heated in an airless environment, and then subjected to additional chemical treatment. The result is a frame material with small holes. The essence of using the smallest possible holes is to increase the contact surface. The greater the ratio of body surface to volume, the more active its compound and the better it is absorbed. Thus, the specific surface area of Favn pistachio coal is $400 m^2$ per gram; for the most complex grades, this figure can reach $1800-2200 m^2$



Rice. 2. Appearance of a pistachio idol used in medicine.

However, with the discovery of new, more effective bactericidal drugs, and then antibiotics, the popularity of activated carbon as a therapeutic agent has decreased. This drug is still the most effective antimicrobial antidote, binding a large number of toxic substances and preventing their absorption due to high surface activity. So, just 1 gram of pistachio charcoal Fawn can bind 800 mg of morphine, 700 mg of barbital , 300-350 mg of other barbiturates and alcohol.

Results. Results. Dissolved (activated) pistachio charcoal-carboline has an enterosorbent , detoxification and antidiuretic effect.

Belongs to the group of polyvalent physicochemical antidotes, has high surface activity, absorbs poisons and toxins in the gastrointestinal tract and before their absorption. Active in hemophilia as a sorbent.

Weak adsorption of alkalis and acids, as well as iron salts, cyanides, malathion , methanol, ethylene glycol. Does not affect mucous membranes. When treating intoxication, it is necessary to ensure an excess of pistachio charcoal in the stomach (before gastric lavage) and in the intestines (after gastric lavage). Reducing the concentration of pistachio charcoal in the environment leads to desorption of the bound substance and its absorption.

dosed administration is required, because the contents of the gastrointestinal tract are absorbed by pistachio charcoal and the activity of pistachio charcoal is reduced. Pistachio charcoal should be used for several days in case of poisoning with substances involved in the enterohepatic circulation (cardiac glycosides, indocin , morphine and other opiates). It is especially effective as a sorbent for hemoperfusion in acute poisoning with barbiturates, glutamide , and theophylline [7]. Tiradi reduces the effectiveness of other drugs that are taken at the same time and drugs that affect the mucous membrane of the gastrointestinal tract. Medical use: detoxification , dyspepsia, flatulence, putrefaction, fermentation processes, hypersecretion of honeydew juice, diarrhea with endo and exotoxicity due to increased acidity of honeydew juice;

Alkaloids, glycosides, heavy metal salts, food poisoning;

Food toxicoinfection , dysenteric salmonellosis, toxemia and burn disease in the stage of septicotoxemia ;



Renal failure, chronic hepatitis, acute viral hepatitis, liver cirrhosis, atopic dermatitis, bronchial asthma, gastritis, chronic cholecystitis, enterocolitis, cholecystopancreatitis

Poisoning with chemical compounds and drugs (including phosphorus and chlorogen compounds, psychoactive drugs), allergic diseases, metabolic disorders, alcohol withdrawal syndrome;

Chemotherapy against the background of radiation and intoxication in cancer patients: in preparation for x-ray and endoscopic examination (to reduce the amount of gases in the intestines).

Contraindications: use this remedy for ulcerative lesions of the gastrointestinal tract (including gastric and duodenal ulcers, ulcerative colitis), bleeding from the gastrointestinal tract, when taken simultaneously with drugs whose effect begins after absorption. , etc.). Side effects of activated pistachio charcoal on the body: side effects of the drug include dyspepsia, constipation or diarrhea, with long-term use - hypovitaminosis, nutrients (fats, proteins), hormones in the gastrointestinal tract are reduced by absorption.

Activated pistachio charcoal for hemoperfusion-thromboembolism , bleeding, hypoglycemia, hypocalcemia , hypothermia, lowering blood pressure. People have long used activated charcoal as a natural water filter. Just as it does in the intestines and stomach, activated charcoal can interact with and absorb a range of toxins, drugs, viruses, bacteria, fungus, and chemicals found in water. In commercial settings, such as waste-management centers, operators often use activated carbon granules for one part of the filtration process. Dozens of water filtration products are also designed for at-home use, using carbon cartridges to purify water of toxins and impurities.

A 2015 study^{Trusted Source} found that water filtration systems that used carbon removed as much as 100 percent of the fluoride in 32 unfiltered water samples after 6 months of installation. While this shows the effectiveness of carbon filtration, it should be noted that in the U.S., adding fluoride to community water supplies of many cities has improved the oral health of millions of American citizens. Diarrhea. Given its use as a gastrointestinal absorbent in overdoses and poisonings, it follows that some people might propose activated charcoal as a treatment for diarrhea.

In a 2017 review of recent studies on the use of activated charcoal for diarrhea, researchers concluded that it might be able to prevent bacteria and drugs that can cause diarrhea from being absorbed into the body by trapping them on its porous, textured surface. The researchers also pointed out that activated charcoal had few side effects, especially in comparison with common antidiarrheal medications.

Teeth whitening and oral health. Dozens of teeth-whitening products contain activated charcoal. Many oral health products that contain activated charcoal claim to have various benefits, such as being:

- antiviral
- antibacterial
- antifungal
- detoxifying

Activated charcoal's toxin-absorbing properties may be important here, but there is no significant research to support its use for teeth whitening or oral health.



In a 2017 review, researchers concluded there was not enough laboratory or clinical data to determine the safety or effectiveness of activated charcoal for teeth whitening or oral health. Skin care. Researchers have reported that activated charcoal can help draw microparticles, such as dirt, dust, chemicals, toxins, and bacteria, to the surface of the skin, which makes removing them easier. Deodorant. Various activated charcoal deodorants are widely available. Charcoal may absorb smells and harmful gases, making it ideal as an underarm, shoe, and refrigerator deodorant. Activated charcoal is also reported to be able to absorb excess moisture and control humidity levels at a micro level.

Conclusion. You should not take other medications with pistachio charcoal because they are inevitably absorbed, and at the same time, pistachio charcoal reduces the ability to absorb toxic substances. The use of activated pistachio carbon as a sorbent is most effective in the first 12 hours after poisoning. At the same time, pistachio charcoal itself is not absorbed and not metabolized in the gastrointestinal tract; is excreted in the stool and turns it black. Activated pistachio charcoal can also be taken for flatulence (abdominal rest), dyspepsia, colitis, increased acidity of gastric juice, diarrhea, food poisoning. 1.5-2 g 2-4 times a day 12 hours after meals, washed down with water (preferably crushed tablets work better).

However, this drug is not intended for long-term continuous use. It is used as a first aid and is usually taken within a few days. In fact, activated pistachio charcoal binds many substances (enzymes, vitamins, amino acids, etc.) in the gastrointestinal tract that are not only toxic, but also beneficial to the body. In addition, studies have shown that chronic use of this drug can lead to unwanted toxic effects (nausea, vomiting and other unpleasant complications).

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