

THE STUDY OF ANTIMICROBIAL ACTIVITY OF ALOE COMBINED PREPARATIONS

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Aloe vera has an incredibly rich and various chemical composition. This plant consists of a huge list of amino acids, minerals, enzymes, vitamins and other biologically active substances.

Aloe has a number of useful properties, it is an antiseptic, an adaptogen, a cell growth stimulator, a source of nutrients, an antitoxic component, an analgesic and an immunomodulator at the same time.

Aloe vera has high antimicrobial activity. These properties were accepted in 1949 due to R.Y. Gottshalla`s experiments and researches. Aloe extract in high concentrations has bactericidal activity against a number of bacteria. So it was found effective against *Streptococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Streptococcus pyogenes*, *Streptococcus agalactiae*, *Enterobacter cloacae*. Aloe preparations are also known for use in the complex treatment of numerous fungal and even viral infections.

Aloe has powerful healing properties, including anti-inflammatory and reparative effects. Aloe juice can quickly heal the skin, clearing it of small chaps and wounds. Aloe juice is added to cosmetic products, which makes them intensively moisturizing for skin and contributing to the constant stimulation of its own collagen formation. It is also expedient to create and use medicinal preparations and cosmetic products based on aloe, combined with other active components to enhance its antimicrobial, regenerating and other properties.

The addition of calendula tincture to aloe juice is important for the treatment of oily and problematic skin. Calendula is a powerful anti-inflammatory, disinfectant and antimicrobial agent, it also promotes skin regeneration. Therefore the complex of aloe and calendula is able to show a strong disinfecting and wound healing effect.

Vitamin B5 (Dexpanthenol) stimulates the skin regeneration and mucus membranes, increases the strength of collagen fibers and so is used to moisturize and treat various skin lesions in pharmaceutical and cosmetic products. Using a combination of aloe and vitamin B5 will make it possible to obtain more effective remedy for treating and regenerating skin than well-known monotherapies.

As many people of all ages face with skin problems, the topic of studying the antimicrobial, anti-inflammatory, wound-healing and reparative properties of aloe and complex preparations based on it is an actual problem.