

## **STUDY OF THE RELEVANCE OF DEVELOPMENT HAND SANITIZER**

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**Introduction.** Hand sanitizer, also called hand antiseptic, handrub, or hand rub, agent applied to the hands for the purpose of removing common pathogens (disease-causing organisms). Hand sanitizers typically come in foam, gel, or liquid form. Their use is recommended when soap and water are not available for hand washing or when repeated hand washing compromises the natural skin barrier (e.g.,

causing scaling or fissures to develop in the skin). Although the effectiveness of hand sanitizer is variable, it is employed as a simple means of infection control in a wide variety of settings, from day-care centres and schools to hospitals and health care clinics and from supermarkets to cruise ships.

**Aim.** The theme of this work was the study of the relevance of developing extemporal gel for hand sanitizer.

**Materials and methods.** The objectives were to assess literature to analyzed and study information about hand sanitizer.

**Results and discussion.** Depending on the active ingredient used, hand sanitizers can be classified as one of two types: alcohol-based or alcohol-free. Alcohol-based products typically contain between 60 and 95 percent alcohol, usually in the form of ethanol, isopropanol, or n-propanol. At those concentrations, alcohol immediately denatures proteins, effectively neutralizing certain types of microorganisms. Alcohol-free products are generally based on disinfectants, such as benzalkonium chloride, or on antimicrobial agents, such as triclosan. The activity of disinfectants and antimicrobial agents is both immediate and persistent. Many hand sanitizers also contain emollients that soothe the skin, thickening agents, and fragrance.

The effectiveness of hand sanitizer depends on multiple factors, including the manner in which the product is applied (e.g., quantity used, duration of exposure, frequency of use) and whether the specific infectious agents present on the person's hands are susceptible to the active ingredient in the product. In general, alcohol-based hand sanitizers, if rubbed thoroughly over finger and hand surfaces for a period of 30 seconds, followed by complete air-drying, can effectively reduce populations of bacteria, fungi, and some enveloped viruses (e.g., influenza A viruses). Similar effects have been reported for certain alcohol-free formulations, such as surfactant, allantoin hand sanitizer.

**Conclusion.** Given the literature and analyzing the main components of antiseptic agents, it is important to develop an extemporaneous antiseptic gel.

## PHYTO-CHEMICAL RESEARCH OF MUSHROOM TREATMENTS

### *PHALLUS IMPUDICUS*

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**Introduction:** Despite modern scientific advances in the treatment of cancer, folk medicine has not lost its value, and thousands of seriously ill patients are turning to it as the last hope for healing. Humankind has long learned to use the gifts of nature in the form of infusions, using vodka as extractant. To the population of Ukraine, mainly in the countryside, well-known is common stinkhorn (*Phallus impudicus*), which is used solely for medicinal purposes.

In folk medicine use water and alcohol tinctures of fresh or dried mushrooms, as well as raw. It is used both locally and internally for all kinds of diseases: gastritis, gastric and intestinal ulcers, cardiovascular diseases, thrombophlebitis, fibroids, mastopathies, ovarian cysts, prostate adenoma, any malignant tumours, sexual weakness, psoriasis and eczema, gout, during chemo and radiotherapy, to prevent metastases and recurrence of cancer.

The antitumor properties of stinkhorn are associated with polysaccharides found in higher fungi,  $\beta$ -glucans, which activate specific cellular immunity, activating inhibited cytotoxic T lymphocytes, or natural killers that begin to produce perforin proteins, which ruin cancer cells. Also discovered are fungal "phytoncides", which have a detrimental effect on viruses, ranging from rhino viruses to AIDS and others. The champions in the amount of these volatiles are the Japanese shiitake mushroom (*Lentinula edodes*) and our common stinkhorn (*Phallus impudicus*).