

Results and discussion. Convenience and affordability is the main advantage of these products. A medical bed is a bed with a special design designed to accommodate bedridden patients in the postoperative period, as well as immobile patients during bed rest and sever ill patients.

Multifunctional medical beds can have a variety of functions and additional equipment. All models are differing in the material they are made, number of sections, and transformation options. Only a correctly selected bed for a particular case will help a patient to recover as soon as possible, to improve his condition, and to provide the necessary conditions. They can be divided into beds: functional medical, hospital-based, medical with mechanical drive (adjustable back and foot sections (2, 3 and 4 sections)); mechanical on wheels 2 sections; with electric drive (2, 3 and 4 sections); 4-section medical with recessed bed; resuscitation beds 2-section; complete with an infusion stand, beds - wheelchairs for moving patients 4-section; mechanical and electric medical with a toilet; stationary trauma beds; electric with the function of a mobile chair and a sanitary device; mechanical for home care. The beds can be additionally equipped with side rails, a bedside table, a toilet, a dropper mount, fixing straps, hooks, etc.

Conclusions. With the help of medical beds, it will be much more convenient for a person with limited moving functions or a sever ill patient. Modern mechanisms will provide all necessary for recovery, will make the rehabilitation period less burdensome for the patient and staff. The relevance and need for these products is increase, therefore, inventions in this area are very promising.

PROSPECTS OF APPLICATION OF HAND LOTION WITH TEA TREE OIL AND IT COMMODITY ANALISIS

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Introduction. Coronavirus infection is an acute viral disease caused by coronaviruses. In humans, coronaviruses cause damage to the respiratory tract and gastrointestinal tract. The World Health Organization said that the new coronavirus is deadlier than the common flu, with a mortality rate of 3.4 percent. Seasonal flu kills fewer than 1 percent of those infected. As the number of new cases outside China surges, concerns of a global pandemic are also rising.

Hand hygiene and disinfections is one of the key point to protect yourself and others from the novel coronavirus. If soap and water are not readily available, must be used a hand sanitizer that contains at least 60% alcohol.

Thus development of handrub formulations with antimicrobial, antibacterial and antiviral properties is an actual task of modern pharmacy.

The aim of this thesis is development of handrub formulations with antimicrobial, antibacteria l and antivirat properties with tea tree oil.

Materials and methods. Tea tree oil is a natural plant extract. It can be extracted when the leaves from the plant are distilled with steam in order to obtain the oil that's why it cannot be reproduced, which make it so highly valued for its healing properties.

This essential oil has potent antimicrobial and antiseptic properties which can help combat difficult and unpleasant skin conditions, as a natural alternative to medicines and topical skin care products which may contain harsh chemicals and its a popular choice for treating acne because of its anti-inflammatory and antimicrobial properties. It's thought to calm redness, swelling, and inflammation. It may even help to prevent and reduce acne scars, leaving you with smooth, clear skin.

Tea tree oil contains a number of compounds, including terpinen-4-ol, that have been shown to kill certain bacteria and fungi , it also appears to increase the activity of the white blood cells, which help

fight germs and other foreign invaders .These germ-fighting properties make tea tree oil a valued natural remedy for treating bacterial and fungal skin conditions, preventing infection and promoting healing.

WHO recomend to choose components for the handrub formulations taken into account cost constraints and microbiological efficacy. Was choosed next formulation for hand lotion given in the table 1.

Table 1. Formulation of hand lotion with tee tree oil

Humactant:	Dipropylene glycol	1.0
	Sorbit	1.0
Surfactants:	POE(20) oelyl alcohol ether	1.0
Astringent :	zinc sulfophenol	0.2
	Tea tree oil	0.1
Ethanol :		60.0
Perfume :		q.s.
Preservative :		q.s.
Buffer :		q.s.
Coloring agent :		q.s.
Anti-fading agent :		q.s.
Purified water:		up to 100

Manufacturing procedure:

Dissolve the humectants, astringent, buffer and anti-fading agent in the purified water at room temperature (water phase). Then dissolve the Tea tree oil, perfume, surfactant and preservative in the ethanol (alcohol phase), and solubilize the alcohol phase in the water phase. Add the coloring agent for toning, filter and put the product in containers.

Formulated lotion was evaluated for homogeneity by naked eye examination. This involved a subjective assessment of appearance including the presence of any aggregates. All prepared samples of the lotions formulations were clear, transparent and homogeneous solutions upon preparation which exhibited a pH of 6.3 with no significant difference with all the formulated lotions.

Conclusion. In conclusion, alcohol based antiseptics remain the best for handwash and hand hygiene between patients. Hand lotion with tee tree oil showed excellent results in decreasing bacterial count however, it is still less than alcohol based antiseptics. Hand lotion with tee tree oil can be a good alternative for those whom suffer from skin allergies, have broken skin areas and have dry skin.