

RESEARCH OF TECHNOLOGICAL PROPERTIES OF PLANTAGO MAJOR, HEDERA HELIX AND SALVIA OFFICINALIS AND THEIR MIXTURE

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Cold diseases or acute respiratory infections are the most common diseases, which stipulates their medical and social significance. Acute respiratory infections account for more than 90% of human infections. The characteristic symptoms of this diseases are sore throat, rhinitis, cough and fever. For the rational therapy choice attention should be paid to the effectiveness and safety of medicines. Over the past decades, significant demand have gained herbal products.

As the plant material have been chosen leaves of *Plantago major*, *Hedera helix* and *Salvia officinalis*. As it is known, the leaves of the *Plantago major* contain polysaccharides and flavonoids, among the latter determine, rutin, apigenin, luteolin. Expectorant action of plantain leaves is due to the presence of polysaccharides. Saponin glycosides of *Hedera helix* determine its secretolytic effect, hydroxycinnamic acids exhibit immunostimulatory and anti-inflammatory effect. Hydroxycinnamic acids, flavonoids and tannins of *Salvia officinalis* exhibit anti-inflammatory, antimicrobial and astringent effect.

The aim of this work is to investigate technological properties of these plants separately and mixture of these plants.

The relative density, the bulk density, the porosity raw, the free volume of the plant layer, the absorption coefficient (purified water), the humidity, the flowability, the angle of repose, the content of extractives (purified water), the content of polysaccharides were studied for each plant separately. The results of the studied parameters were sufficiently close to other plants and did not have large deviations.

The next step was to prepare the mixture of *Plantago major* leaves, *Hedera helix* leaves and *Salvia officinalis* leaves in the ratio 5:1:1. The following are some of the parameters that have been studied for the mixture. The relative density - 1,36 g/ml, the bulk density - 0,21 g/ml, the porosity raw - 0,37, the free volume of the plant layer - 0,82, the absorption coefficient (purified water) - 1,90 ml/g, the humidity - 9,61%, the flowability - no value, the angle of repose - 45°, the content of extractives (purified water) - 38,72%, the content of polysaccharides - 13,83%.

The obtained technological parameters will be used in the development of the extraction drug technology of this mixture.