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Investigation of consumer characteristics of Holofiber® materials for wound dressings

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Abstract

Not only traditional materials are used as dressings: cotton wool, but also modern dressings with good hygienic properties that meet modern methods of wound treatment. Modern foreign-made wound dressings are expensive and, therefore, inaccessible to a wide range of consumers in Russia. Thus, the development of a domestic wound dressing is an actual test.

The use of Holofiber® for medical purposes is primarily due to their high functional characteristics: microporosity; hydrophilicity (hydrophobicity); good air permeability at the same time as dustproof function; antiseptic (barrier properties to microorganisms, low bacteriological permeability); non-toxic and hypoallergenic.

The following material was selected as the objects of research: Holofiber® SOFT R 5197, surface density 150 g/m^2; Holofiber® VOLUMETRIC P 84 with surface density of 150 g/m^2; Holofiber® PROFI R 35191, surface density 100 g/m^2; Holofiber® Medium P103, surface density 100 g/m^2. The following tests were carried out: air permeability, electrification, hygroscopicity, bending stiffness, absorption capacity, strength.

When analyzing all consumer characteristics for wound lacing, the material Hollofiber® VOLUMETRIC R 84 was chosen, since with the materials Hollofiber® SOFT R 5197, Medium R103, PROFI R 35191 it has a relatively high indicator of air permeability, hygroscopicity, absorption capacity, while it has a low low indicator. tel of electrification, surface stiffness coefficient. Breaking load is not decisive for wound dressings, therefore low values of breaking load for Holofiber® VOLUMETRIC P 84 do not affect product quality. Based on the data obtained, the material Hollofiber® VOLUMETRIC P 84 was recommended for the wound dressing being developed.

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