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9940 572 462



6381 907 438



ijirset@gmail.com



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Water Swimming Properties of Thick Fabrics

Dadaboyev Farxodjon Maxmudjonovich, Parpiyev Umidjon Meliyevich, Sharipov Furqat Shavkat o'g'li,

Xolboyeva Mamura Maxammadxo'ja qizi

Head Teacher, Namangan Institute of Engineering and Technology, Uzbekistan

Assistant, Namangan Institute of Engineering and Technology, Uzbekistan

Bakalavr, Namangan Institute of Engineering and Technology, Uzbekistan

ANNOTATSIYA: Ushbu maqolada qalin gazlamalarni suv shimilishini aniqlash laboratoriya sharoitida o'rganib chiqilib, tadqiqotlarda yurtimiz bozorlarida keng tarqalgan va yuqori darajada xaridorgir bo'lgan ustki kiyimlar uchun qo'llanilayotgan paltobop gazlamalar sinovdan o'tkazildi. Ularni tola tarkibi va suv shimish xossalari o'rganildi.

Tayanch so'zlar: ustki kiyim, issiq saqlovchi, tabiiy, zig'ir, tola, gazlama, organoleptik usul, gazlamani g'ijimlanishi, tanda, arqoq, burma, jun, lavsan, kalava ip, gazlama, o'simlik tolasi, alanga, jizg'anak, issiq saqlash, zichlik, tuk chiqarish, o'rinish, chang oluvchanlik, suv shimishi.

АННОТАЦИЯ: В статье исследуется в лабораторных условиях впитывание воды толстых тканей, а также в исследованиях тестировано ткани пальто для верхней одежды которые широко используются на рынках нашей страны. Изучены их свойства впитывание воды и состав волокна

Ключевые слова: верхняя одежда, теплоизоляционная, натуральная, лен, волокно, ткань, органолептический метод, сморщивание ткани, танда, аркак, бирма, шерсть, лавсан, пряжа, ткань, растительное волокно, пламя, джизганак, накопление тепла, плотность, эпиляция, плетение, пыль, водное набухание.

ANNOTATION: The article investigates the water absorption of thick fabrics in laboratory conditions, and also tests the fabrics of coats for outerwear, which are widely used in the markets of our country. Studied their water absorption properties and fiber composition

KEYWORDS: outerwear, heat-insulating, natural, flax, fiber, fabric, organoleptic method, wrinkling of fabric, tanda, arkak, burma, wool, lavsan, yarn, fabric, plant fiber, flame, jizganak, heat accumulation, density, hair removal, weaving, dust, water swelling.

The climatic conditions in our region show that there is a high demand for warm clothes. Humans use a variety of clothing to protect themselves from natural discomfort. The most common heat-retaining garments include coats, jackets, and coats. Among them, coats are distinguished by the fact that they can be worn at different ages and conditions. The main details of the coats are made of fabrics of different properties. Winter coats are important for keeping warm, waterproof, airtight and dustproof. The next most important features are the lightness of the garment, its resistance to sunlight and electrification. These properties of raw materials depend on the type of fibers that make them up, the texture structure and the various additional processing. Although natural fiber fabrics do not have bright colors, they retain heat well [1]. However, natural fabrics are considered to be highly water absorbing and permeable. This prevents the outerwear from moving outdoors for long periods of time during rain. The study tested coat fabrics used for outerwear, which are widely used in the domestic market and are in high demand. Their fiber content and water-repellent properties were studied. The fiber content of fabrics is determined by organoleptic methods. This method is recommended to determine the fiber content of fabrics in the following order: inspect the appearance of the fabric, wrinkle the fabric, determine the type of yarn and back yarn, cut the yarn and back yarn, burn tan and back yarn vision, as well as by microscopic testing.

When determining the fiber content of the fabric, first of all it is necessary to pay attention to its color, luster, thickness, density. Then you have to wrinkle it. To do this, fold the fabric, squeeze it tightly by hand, loosen after 30s and flatten by hand. The composition of the fabric is determined by the nature of the folds formed. The body and back threads are then inspected and the burning of the test threads is observed. Keep in mind that woolen fabrics feel like hair when touched. When determining the type of fabric, it is necessary to fold it: in fine wool fabrics small folds are formed, which disappear when flattened by hand, in woolen fabrics woven with the addition of plant fibers large relief folds are formed. , does not disappear when flattened by hand, large folds are formed in fabrics woven with the addition of lavsan, and disappear when flattened by hand. The fleece and back yarns are burned to see if there are any impurities in the wool. Pure wool yarn burns in the flame, does not burn when taken from the flame, the ends form black bubbles, which are rubbed when rubbed with your fingers, they smell of burnt feathers. The heat storage properties of fabrics are important for coat raw materials. These properties depend on the fiber content, thickness and density of the fabric [2]. Wool fabrics have the highest heat retention properties, while linen fabrics have the lowest.

Pressing, hair removal, pressing processes improve the heat retention properties of fabrics. The use of multi-layered braids results in the formation of many air layers in the fabric, which improves the heat retention properties of the fabric. Thick, dense woolen fabrics have the highest thermal insulation properties. Dustiness is the dirtiness of a fabric. It depends on the nature of the fabric right, the fiber content, density and texture of the fabric. Wool fabrics made of fine wool have a very high dust absorption.



Figure 1. Determination of water absorption of polyacrylic fabric.

Waterproof fabric resistance to water infiltration is very important for special waterproof fabrics, cloak fabrics, coat and suit wool fabrics. Waterproofing depends on the fiber content and density of the fabric. To increase the waterproofness of the fabric and make it waterproof, it is given waterproof and waterproof makeup. The water resistance of the material was determined in polyacrylic fabric (Figure 1). In this case, the sample, which is mounted on two of the four columns, is filled with water on the hanging part of one, and from this point on, the time taken for three drops of water to pass through the sample is recorded. This is the time when the fabric becomes waterproof. The study of water absorption or absorption was carried out using fresh water, rain, snow, and alkaline water. The purpose of selecting such objects is to study the level of exposure of the fabric to rain and snow, as well as when washing the clothes, when the fabric is ready-made.

In the tests, five samples of the most widely used fabrics were selected and 20 mg of water was poured over them. The time taken for three drops of water to pass was calculated. The results are given in the table. Based on the results, we can recommend 4-5 samples for the coat. These samples are resistant to all types of water. Water absorption is low due to the fact that the hair is made of non-woven material and it is difficult for water droplets to move between the feathers. The fleece and kapron fabric is resistant to ordinary water, but not to snow and alkaline water. Fabrics made of mixed fibers (wool + polyacrylic) on the body and back showed relatively long water resistance. The content of the above research is that a person uses thick fabric garments during periods of low air temperature, and

during this period there is a lot of precipitation, which can lead to a number of inconveniences due to incorrect choice of fabric. If the fabric is chosen correctly, their clothes will completely protect people from different climatic conditions.

The results obtained are as follows

№	Sample name	Experiment time (sec)					
		30 and less	31-60	90	120	150	240 and higher
1	Polyamide and wool	0*/0*/0*	0/50/40	-	-	-	600/0/0
2	Half wool (tanda)	-	-	0/115/0	0/0/120		900/0/0
3	Polyacrylic	0/0/30	0/55/0	-	-	-	240/0/0
4	Hairy chemical	-	-	-	-	-	10 hours
5	Half wool	-	-	-	-	-	4 hours / 1 / 0.4

0 * / 0 * / 0 is the time taken for three drops to pass through ordinary water, snow, and alkaline water, respectively.

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