



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

# IJIRSET

International Journal of Innovative Research in  
**SCIENCE | ENGINEERING | TECHNOLOGY**

# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 10, Issue 12, December 2021

**ISSN** INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

Impact Factor: 7.569

9940 572 462

6381 907 438

[ijirset@gmail.com](mailto:ijirset@gmail.com)

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# Diagram of Changing the Field of Directions Measured in the FCS System of State Standards

Usmonova Shaxnoza Anvarovna, Tugalov Bobur Qarshiboy o'g'li, Djumaniyozov Muxammadjon Baxromovich, Akhmedova Mokhinur Fayzullo qizi, Sherqulov Umar Do'sbek o'g'li

Tashkent Institute of Textile and Light Industry (Uzbekistan)

Tashkent Institute of Textile and Light Industry (Uzbekistan)

Association Uztexstilprom (Uzbekistan)

Tashkent Institute of Textile and Light Industry (Uzbekistan)

Tashkent Institute of Textile and Light Industry (Uzbekistan)

**ANNOTATION:** In this article, the mass fraction of defects and impurities of fiber fibers of medium-fiber cotton varieties grown in JSC "Pakhtasanoat Scientific Center" in 2019 were determined in FM and AX analyzers and a diagram of the change in the area of impurities measured in the fcs system of state standards.

**KEYWORDS:** cotton fiber defect and mass fraction of impurities, light reflection coefficient, area of impurities, degree of yellowing

## I. INTRODUCTION

In order to introduce modern forms of organization of cotton and textile production in the country and ensure the production of competitive products, the President of the Republic of Uzbekistan on February 12, 2019 "On measures to further deepen the reform of the textile and clothing industry The adoption of Decree No. 4186 serves to take this area to a new level. In this regard, it is noteworthy that the relevant decisions of the Government, in particular, Resolution No. 253 of March 31, 2018 "On additional measures to organize the activities of cotton and textile industries and clusters." At the same time, most importantly, as a result of integration between cluster enterprises and farms based on market relations, advanced agro-technologies and methods are being introduced in cotton growing and equipped with modern agricultural machinery.

The experience of advanced foreign countries shows that it is impossible to develop agriculture without industry. Indeed, agriculture is closely linked to all industries. In this sense, the farmer not only grows raw materials, but also creates an industrial system for its processing. As a result, the processing plant will be able to create and supply its own raw material base. This year, cotton textile clusters occupy a total of 657,042 thousand hectares in 88 districts of the country, cultivating 63.6% of the total area under cotton in the country, including 52 thousand hectares with foreign investment. For example, last year VST Cluster Agrokomplex LLC was established in Romitan district of Bukhara region..

It is known that there were no effective mechanisms for coordinating the activities of cotton and textile clusters, overcoming systemic problems in their activities and protecting their interests in public administration. In order to further increase the efficiency of cotton and textile clusters, increase the capacity of deep processing of raw cotton, the widespread introduction of science-based methods and intensive technologies in this process "On measures to further develop cotton and textile production" (397- No. 22.06.2020). Nowadays, the use of standard samples to increase accuracy and ensure uniformity of measurements in assessing the quality of cotton products is one of the main conditions of its competitiveness in the world market. Therefore, great attention is paid to their development and use in the cotton industry.

Today, one of the important tasks of Uzbekyengilsanoat is to modernize production, technical and technological renewal, launch domestic products on international markets, strengthen international cooperation for the



implementation of innovative projects and attract foreign partners. All this will allow to raise the light industry of our country to a qualitatively new level.

In order to further develop this sector in our country, reforms aimed at ensuring quality change are being carried out. In particular, foreign and joint ventures equipped with modern technologies are being set up to replace the old spinning mills. Many enterprises of the industry have been modernized, where the production of world-class competitive products has been launched. Privileges and preferences provided to support enterprises operating in the network allow them to take a strong position in foreign markets.

In accordance with its Dst 8.001, standard samples (hereinafter referred to as CN) are standard measuring instruments and are part of the technical means of the system of ensuring the uniformity of measurements of the Republic of Uzbekistan.

Thus, the control of the technological process of the cotton picking machine, in particular, the operating modes of the cleaning equipment, AX and FM-30 cotton analyzers are used to determine the mass fraction of cotton fiber defects and contaminants in accordance with Uz Dst 632: 2015. Cotton analyzer is used for high-precision operation and calibration AX and FM-30, as well as for the mass fraction of defects and impurities of cotton fiber to set their conversion coefficients.

## II. METHODOLOGY

DSNs were tested in the OPTOTEST module of the FCS system, in which quality indicators such as light reflectance coefficient, yellowing rate, area and number of contaminants were determined. The following quality indicators are tested in the OPTOTEST module:

**RD** - reflection coefficient - the amount of light returned on the sample of cotton fiber tested, expressed as a percentage; + b- degree of yellowing -represents the presence of a yellowish component in the test sample; CG- color (code) type and class;

**Trash Area** - the total area of contaminants in the system, determined by measuring instruments, which is determined by scanning the surface of the sample and expressed as a percentage of the surface area of the sample under test; %

**Trash Cnt**- The number of dirty impurities is the number of individual dirty particles in the sample with a diameter of 0.01 inches (0.25mm) and larger. These indicators are statistics on the results of each test: AVE-average; SD- standard deviation; CV- coefficient of variation; Min-minimum (minimum) value; Max-maximum (maximum) value.

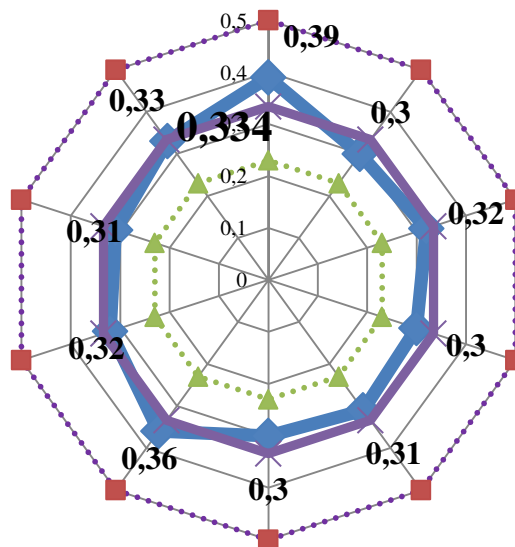


Figure 1. Diagram of the change in the area of contaminants of state standard samples prepared in accordance with the state standard.

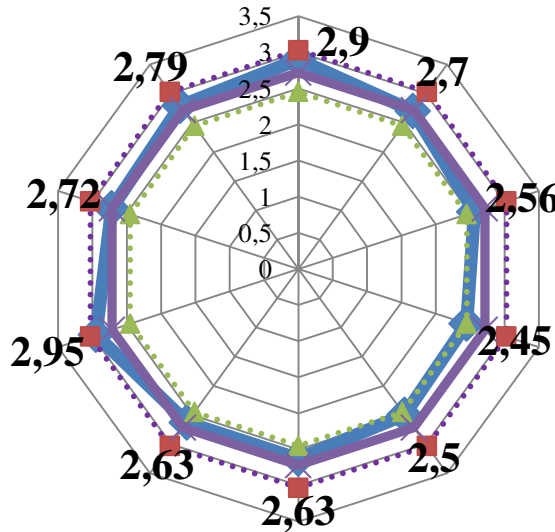


Figure 2. Diagram of the change in the area of contaminants of state standard samples prepared in accordance with the state standard.

### III. RESULTS AND DISCUSSION

In Figure 1, Type I State Standard samples were tested at 10 repetitions of the contaminant area in the OPTOTEST module. When the average of the test result was 0.33, the minimum value was 0.3 and the maximum value was 0.39. According to the analysis of the results, the State Standard samples are close to each other in terms of area of contaminants.

In Figure 2, the Type II State Standard samples were tested at 10 repetitions of the contaminant area in the OPTOTEST module. When the average of the test results was 2.5, the minimum value was 2.45 and the maximum value was 2.95. According to the analysis of the results, the State Standard samples are close to each other in terms of pollution area.

Figure 3 shows the cross-comparison histograms of the State Standard Samples of Types I (2.95) and II (4.36) in terms of light reflectance, yellowing rate, area and number of contaminants.

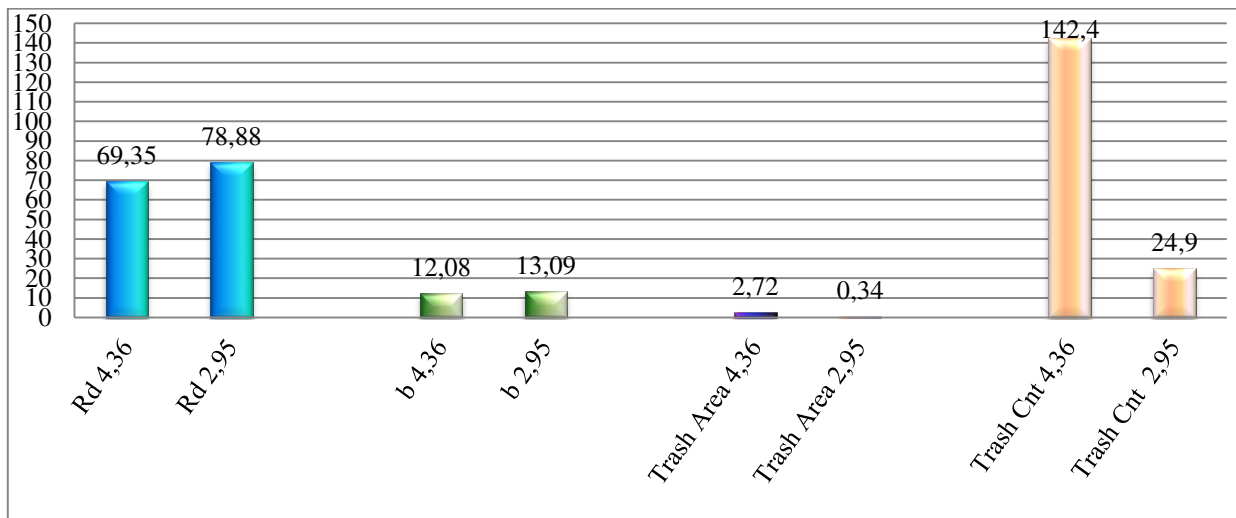


Figure 3. Graph of cross-comparison of state standard samples.



#### **IV.CONCLUSION**

When the impurities were high, the light reflection coefficient and the yellowing level were low results. When tested in the OPTOTEST module, Trash Area Type I DSN (2.95) -0.34, Type II State Standard Samples (4.36) - 2.72, Trash Count Type I State Standard Samples (2.95) -24.9, Type II State Standard Samples -142.4 was found to be equal to.

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