

Development of Cellulose Extraction Technology Based on the Waste of the Cotton Industry

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Annotation. Currently, joint-stock companies Chirchik "Maksam-Chirchik", "Navoi azot" and "Fergana azot" produce nitrogen fertilizers: ammonium nitrate, urea and ammonium sulfate. Open Joint-Stock Companies: Almalyk Ammophos, Samarkand chemical and Kokand superphosphate plant produces phosphorus fertilizers, ammophos, suprefos, ordinary ammonia superphosphate, and ammonium sulfosphate and nitro-calcium phosphate. They are supplied with raw materials by the Kyzylkum phosphorite plant. "Electrochemical Plant" SP-OJSC produces various chemical plant protection products.

Key words: Extraction Technology, Cotton Industry.

The cotton industry has been investigated to recycle waste into high-quality cotton cellulose, which is the raw material of chemical, light and textile industries, to obtain carboxymethylcellulose on its basis. As a result of the research, the technology of obtaining cellulose and composite polymer materials was developed. The innovation feature of the created technology is that it is possible to obtain cellulose-preserving raw materials under the influence of various parameters, cellulose and composite polymer products with roslab desired quality indicators.

COMSCO DEU LTD, located in the Yangi yul district of Tashkent region, exports 100% of its products to the foreign countries produced by the Korean cellulose production enterprise, The cost of 1 ton of cellulose produced at the Fergana furan compounds enterprise is on average 4,000,000 sums. While it is also partial to the domestic market, almost 70-90% is exported aside. The industrial production of cellulose extraction on the basis of fiber waste of cotton-cleaning Enterprises is considered to be 2-2.5 times cheaper than cotton cellulose.

Currently, the amount of cellulose produced in the Republic satisfies only 5-8% of the demand of cellulose products manufacturing enterprises. In order for enterprises to operate at full capacity, these raw materials are imported from countries with a developed pulp industry, for a large amount of foreign currency. However, in addition to cotton lint, there are opportunities to provide cellulose, which is intended to be obtained based on the waste of the cotton ginning industry, such as lint, cotton wool, cotton lint, and cyclone fluff.

It is necessary to pay attention to various factors in order to obtain high quality indicators of the cellulose produced during the processing of fibrous waste by the natron method. In the proposed innovative project, it is required to strictly control these factors, i.e. concentration of alkali, time of cooking process and temperature. Because on the basis of cellulose, which has high quality indicators, its quality products are produced for various industries.

Below (table 1) is some information about the object to be investigated.

Table 1. Some indicators of fiber waste from different marks

№	Degree of filth, %	Amount of cellulose, %	Degree of polymerization	Amount of ash, %
St-3/7/11 mark	29,2	70,8	-	-
St-7/11 mark	17,3	74,7	1400	0,92
St-3 mark	31,5	68,5	1200	-
St-2 mark	10,8	89,2	650	-

From some of the above indicators of fiber emissions, it is known that the chemical properties of cellulose, which are planned to be obtained on its basis, are expected to be high in its reactionary activity. Based on them, during the synthesis of cellulose, the natron method was used, that is, the synthesis process was carried out in a 3% solution of alkali (NaOH).

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