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TECHNOLOGY FOR PRODUCING PAPER FROM LOCAL PLANT WASTE

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Abstract
The article examines how to get paper in cheap and convenient ways.

Keywords: Cellulose, rosin, paper, fiber preparation, bleaching, molding, pressing, processing, drying.

Introduction:
Today, paper is one of the most commonly used products in our daily life. Paper remains the main product for stationery, books, newspapers, mail, reading magazines. Cardboard and paper come from the same manufacturing process but have different characteristics. This consumption is increasing every day. Paper was first obtained in China (II century). Sai Lun managed to get the paper, passing the watery pulp of plant fibers through the mesh. This method was kept secret for a long time, it was introduced in Japan at the beginning of the VI century. In the 1960s, the paper machine consisted of almost the same parts as today's paper machine. Later, all parts of the paper machine were improved. Paper production speed increased by ten mats. Instead of rag raw materials, wood-cellulose fibers were used. Synthetic polymer resins and fibers were increasingly used, and paper manufacturing technologies were improved. In Uzbekistan, paper is mainly produced in Samarkand. In 751, Chinese warriors invaded Central Asia. The ruler of Samarkand at that time, Abu Muslim, directed his neighbor against the invaders, destroyed the enemy and brought more than 20,000 Chinese soldiers to Samarkand as prisoners. To save their lives, Chinese captive warriors who knew the craft taught local artisans the secrets of paper making. There are more than 600 types of paper. In most cases, paper and

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cardboard compete with the products of the textile, woodworking and glass industries. They replace various metal products, are used as construction, insulation, sealing, filtering and finishing materials. Muammolar

Currently, the annual demand for paper raw materials in Uzbekistan is 350,000 tons, of which more than 120,000 tons are offset and newsprint. The State Statistics Committee told Gazeta.uz that in 2021 Uzbekistan imported 231 thousand tons of paper and cardboard worth $300.7 million, while in January-February of this year - 53 thousand tons of 40 thousand tons of paper and cardboard worth $9 million. Last year, Russia accounted for 54% of imports, 49% in value terms. According to the State Statistics Committee, in January 2022, 20.9 thousand tons of paper and cardboard worth $26.5 million were imported to Uzbekistan from 39 countries. Countries where Uzbekistan imported the most paper and cardboard in January 2022:

- Russia-11 thousand tons
- China-2.7 thousand tons
-Finland-1.9 thousand tons
-Belarus-1.5 thousand tons
- Germany-1.2 thousand tons
-Ukraine-1.1 thousand tons
-Sweden-391 ton
-Poland-321.3 tons.

Given this, it is necessary to produce paper in Uzbekistan in cheap and convenient ways.

Paper is a thin material made up of cellulose fibers connected by hydrogen bonds. It is obtained by processing wood, cotton or paper. Paper is a thin material made mainly from plant fibers. It is processed from wood of different types of trees and cellulose of annual plants and wood pulp. In addition to plant fibers, various additives are added to the paper pulp, minerals that give a white color, making it dense, smooth, improving the ability to perceive paint (kaolin, talc, etc.); add adhesive materials (rosin glue, starch, tar, etc.), dyes, chemical fibers, etc., which do not spread ink, do not make the paper smooth and dense.

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Traditionally, paper is made in stages.

Fiber preparation	Bleach	Molding & Pressing	Finishing and drying:
When trees are cut down, the tree is cut into small pieces. They are heated in a tank with water and various chemicals. The most commonly used material for processing is wood pulp made from soft tree species such as spruce or poplar	Materials such as starch and clay are added to the mixture before the pot is heated and dried. This will give the paper shine and strength. Finally, it can be bleached, bleached, or bleached with some kind of chlorine. Hydrogen peroxide can also be used for bleaching, although it contaminates the product too much.	After the bleaching process, the paper is wound on a large roll for pressing and the smoothness of the surface of the paper is checked.	The last step is to slice it and wrap it in large rolls to dry it completely.

Summary

All over the world, paper is made from trees. Depending on the type of wood and wood we have, it can be used to make furniture or paper. Wood has many uses depending on its nature and demand. A lot of raw materials are needed for its production. Paper production is the cause of constant deforestation. The main wood is imported from abroad. This leads to an increase in the cost of paper. This not only increases the cost, but also causes great damage to the environment. We all know that plants absorb CO2 and emit O2. Therefore, we must protect the world of plants. The main raw material for paper is cellulose (C6H10O5). This, in turn, makes a great contribution to the localization of raw materials in paper production, as well as to the targeted use of waste.

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This vegetable waste comes in large quantities from oil and butter plants, fruit juice factories and similar plants and factories. Some of them are used for various purposes and production of products. But this does not cover all the losses. The production of paper products based on the waste of this plant, in turn, leads to the enrichment of paper raw materials with local waste and a reduction in cost.

Paper is obtained from local waste in 9 stages as follows:

1. Wash waste
2. wash and dry
3. grinding in a special meat grinder
4. Plant resin + water + chemicals + rosin + bleach = making dough from waste
5. Placed in special mesh molds
6. Rolled up
7. Dried
8. Compiled
9. will be packed

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