

## THE PROCESS OF FIXING PAINTS OF MIXED TECHNIQUE, CONTRAST, BLEACHING AND DARKENING ON NATURAL ECOLOGICAL ORGANIC FABRIC IN ARTS AND CRAFTS, PAINTING FABRIC IN BATIK TECHNIQUE IN AUTOCLAVES A AT HOME

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A B S T R A C T	K E Y W O R D S
This article discusses ways to fix the dye on a natural ecological organic fabric using the batik technique. The types and characteristics of steaming in a mixed technique of contrast of bleaching and darkening are considered.	batik, natural ecological organic fabric, arts and crafts, painting on fabric, steaming in autoclaves, steaming at home.

### Introduction

This is a way of fixing paints on natural fabric. This process is carried out using wet steam. The essence of the steaming technology is to ensure that the dye pigment firmly enters the structure of the fabric fibers. This occurs only when exposed to moist hot steam in the absence of air for a long time at elevated pressure.

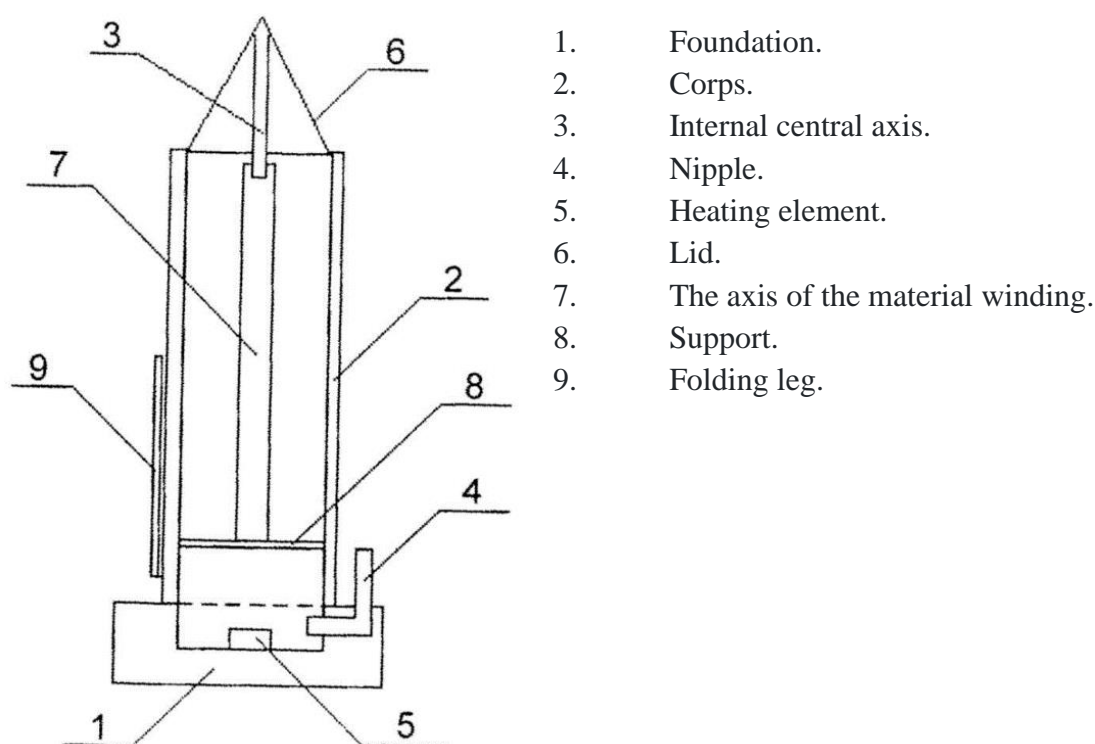
Steaming can be performed:

1. in autoclaves;
2. at home.

### Автоклав.

This is a professional installation (*see Fig. 1*) that provides the conditions necessary for fixing paints: high temperature and pressure.

When steaming in an autoclave, the temperature is set to 104-110 ° C and the overpressure is 0.5 atm. Heating takes place for 20 minutes, then the specified temperature is maintained for 40-50 minutes, then cooling for 20 minutes. For silk, the time to maintain a constant temperature is 40 minutes, for crepe de chine and satin - 45 minutes, for wool, linen and cotton - 60 minutes.



*Fig.1. Autoclave diagram.*

The above-mentioned autoclave (steamer) with a folding leg allows you to steam fabric up to 145 cm wide.

Algorithm of the sequence of actions of steaming paints in the batik technique in an autoclave:

1. The steamer tilts all the way to the folding leg, the cover is removed from the body and the winding axis is pulled out.
2. The dyed fabric is laid with paper and wound on the winding axis, wound on top of 2-3 turns of paper and fixed on the axis with threads or rope.
3. The axis with the wound cloth is placed in the body of the steamer, covered with a lid with the axis, and the steamer is brought to the vertical position.
4. Water is poured into the nozzle and the steamer is connected to the mains. The volume of water poured reaches 2 liters. Exit to the steaming mode for 10-15 minutes, depending on the initial water temperature.
5. Depending on the type and volume of the wound fabric, the steaming process lasts from 20 minutes to 60 minutes. If necessary, water is topped up.
6. At the end of steaming the dyed fabric, the steamer must be turned off and, taking precautions, pull the winding axis out of the steamer.

After professional fastening, the fabric is more delicate and soft. The color of the product is deeper and more saturated. It is recommended to wash the fabric in warm water with the addition of a mild detergent and rinse in water with the addition of acetic acid (2 tablespoons per 10 liters of water). A slight flush of the dye is allowed.

At home.

Necessary equipment and materials:

1. metal container (bucket, tall pot or tank). A slow cooker and a double boiler are also suitable;
2. wooden stick;
3. a piece of cloth;
4. a blanket or pillow that allows steam to pass through well;
5. cord or rope made of natural fibers;
6. old newspapers.

Algorithm of the sequence of actions for steaming paints in the batik technique at home:

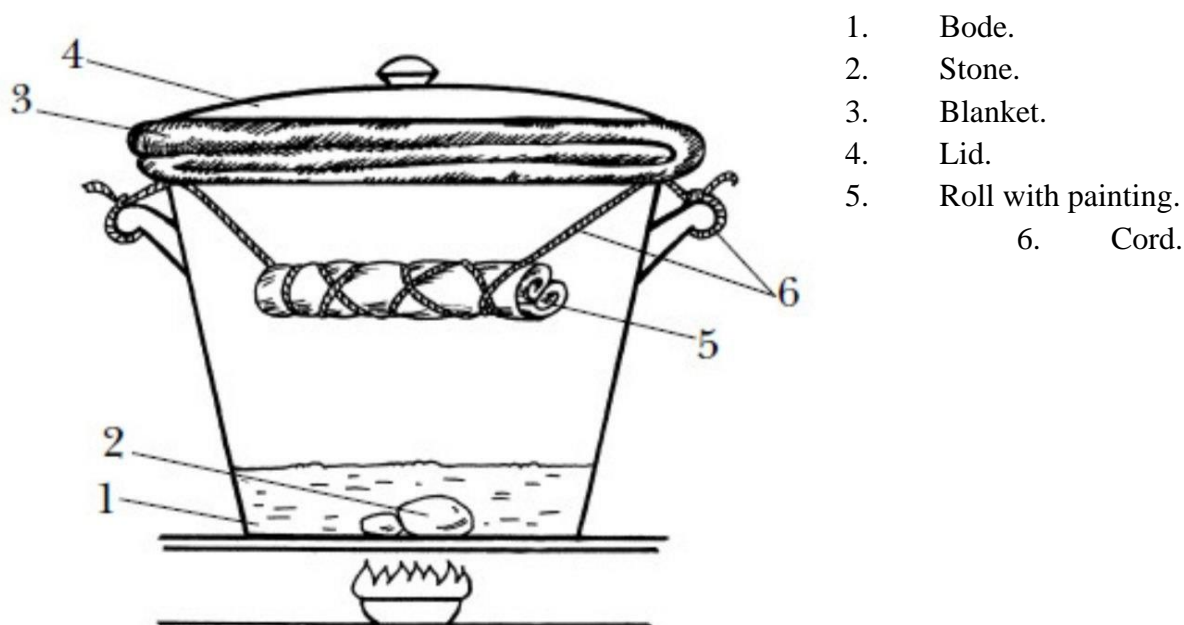


Рис.2. Схема запаривания в домашних условиях.

1. The painted fabric is laid out on a piece of fabric in such a way that the product fits completely on it. Both pieces of fabric together are carefully rolled up into a roll.
2. The roll is wrapped in old newspapers (new ones are not used, as fresh printing ink can stain the product). After that, the roll is rolled up with a "donut" and fixed in several places.
3. The cord is securely fastened across the container (*see Fig. 2*). To prevent it from sagging, put a wooden stick. When hanging a fabric bundle, it is important to ensure that it is distant from the walls of the container and is **not too low**. Be sure to ensure that condensation does not collect on the surface of the roll and on the cord and that newspapers do not get wet from its impact. When steaming natural fabric in the batik technique at home, a dry heating method is used.
4. After securely fastening the fabric roll, a little water is drawn into the container, filling it by about 1/4. Put a saucer or stone at the bottom of the container, which will allow you to control the water level.
5. Steaming is performed over low heat, covering the container with a blanket or pillow. At the same time, the product used should not absorb moisture. The duration of the process depends on the density

of the tissue and is usually 1.5-2 hours Steaming the painted fabric requires constant monitoring. It is necessary to monitor the water level.

6. After a certain time, the bundle is taken out of the container. When it has cooled, carefully unfold. Then the product is washed in water at a temperature of 30 ° C with the addition of acetic acid (2 tablespoons per 10 liters of water). When water drains from the product (cannot be unscrewed), it should be ironed and hung.

## Conclusion

Steaming is one of the last stages of technological processes in the batik technique. Therefore, it is one of the most important. It must be approached seriously, use all the necessary knowledge gained in practice. It is necessary to choose the temperature, time and pressure during steaming, taking into account the characteristics of the fabric (origin, type and density). It is important to ensure that the processed product is steamed evenly, since the color saturation depends on it. Do not allow the folds of the fabric during folding, as the folds cannot be leveled or smoothed after steaming. You should show all your professionalism to demonstrate the uniqueness and individuality of the product.

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