

STIFFENING AGENTS

i. Starch

Starch is used in laundry work to stiffen cotton and linen fabrics. It gives the fabrics a smooth surface and fresh look a starched article keeps clean longer than an unstarched article because dirt cannot adhere easily to the smooth surface.

In Nigeria laundry starch is commonly obtained from cassava. It can, however, be equally obtained from potatoes, rice, yams, cocoyams, maize, etc. Starch from these other food-stuffs is not as strong as the one obtained from cassava. The starch from these other sources is useful when only light stiffening is needed.

How Starch Works

In boiling water, starch gelatinizes or jellifies. When it is applied to a fabric, it coats the fibres. When the fabric is finished with hot iron, the coated fibres stick together, making a compact stiffened fabric.

Process of Making Cassava Starch

1. Peel off the cassava skin.
2. Wash the peeled cassava thoroughly.
3. Grate the cassava into a clean bowl.
4. Add cold water to the grated cassava and mix well.
5. Strain the content carefully through a clean piece of cloth or muslin.
6. Add more water to the chaff, and extract more starch. Repeat the process until all starch is extracted.
7. Allow the starch to settle, and place the starch into a clean muslin. Press to get rid of as much moisture as possible.
8. Place starch in shallow trays and leave in the sun to dry thoroughly before storage.

This is boiling or hot water starch.

Different Types of Starch and their Applications

A. Hot or Boiling Water Starch

1. Mix 2 tablespoonfuls of starch with a small quantity of cold water. Mix thoroughly into a smooth mixture.
2. Add boiling water, stirring rapidly until the mixture thickens or gelatinizes into a semi-transparent grey jelly.
3. This is full strength starch. In order to use, add cold water until the required strength or consistency. Remove any lumps by straining through a clean muslin.
4. Place the washed article into the solution. Squeeze and knead it to make sure that the starch gets evenly into the fabric.
5. Remove excess water and put out to dry.
6. Iron with a hot iron while the article is still damp.

B. Cold Water Starch

This does not require hot water. It is used for stiffening light articles, collars, and cuffs of shirts and blouses, etc.

1. Mix 1 tablespoonful of starch into a smooth cream with a small quantity of cold water. Where many articles are to be stiffened, the quantity of starch can be increased.
2. Add more water and mix well to obtain the desired strength.
3. Place the articles in the solution. Squeeze thoroughly. Extract water and dry.
4. Iron with a hot iron.

Plastic Starch

This is in liquid form and contains a special compound called resin. An example is "Dip". It stays longer in garments and is not washed out of garment as quickly as the ordinary starch. It is not prepared like common starch. Follow the directions for use given on the

container.

Spray or Aerosol Starches

These are stiffeners made from starch or resins. They are sprayed on to the fabric after it has been washed and dried. After spraying, the part is ironed immediately. Care should be taken in their use, as the iron may tend to stick to them, especially if the sole of the iron is dirty.

Spray starches can be used to stiffen cuffs and collars of shirts, or any special small part of a garment.

Gum Arabic

This is a discharge or exudation from tropical acacia trees. It is used in making a stiffening agent called gum water. Gum water is used for silk, rayon taffets, lace, and other delicate articles.

To make gum water:

1. Wash two tablespoonfuls of clean gum crystals in cold water.
2. Place them in a jar or small container and add one quarter litre of hot water. Leave for about 10 hours.
3. Stand the container in a pan of water and heat over low heat until the gum is dissolved. Keep stirring .
4. Strain through a clean fine cloth when the gum is completely melted. Store in a bottle.

To use, dilute with cold water according to the required stiffness.

Borax

This is a very mild alkali. It is added to starch to increase stiffness and to prevent starched articles from becoming limp in damp weather. It also increases the gloss when starched fabrics are ironed.

Borax is sold as a white powder. It is not readily soluble in cold water. To use, dissolve it with hot water. It can be blended with starch.Glue

All-purpose glue can be diluted to about 1 part of glue to 2 part of water and used as a stiffening agent for women's head ties. The concentration can be increased or decreased, depending on the type and texture of materials being stiffened.