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WASHING AND FINISHING

29.1 INTRODUCTION

To maintain a well groomed look it is important to keep our clothes neat and clean. How do you keep your clothes clean? yes, by washing them regularly. When we wash clothes, they not only become clean, but also look fresh and well-maintained. You must be knowing that to make a dirty cloth look neat and attractive, just washing it with a soap/detergent is not enough. You need to select correct procedures, use correct soap/detergent and give some finishing treatments as well. What are all these procedures materials and treatments? What is the correct way of washing different types of fabrics and articles? Can choosing the right method of washing make cleaning of clothes easier? Questions like these and related are answered in this text.

29.2 OBJECTIVES

After reading this lesson you will be able to do the following:

- elaborate the importance and steps of preparing clothes for washing;
- explain the types of dirt that soil the clothes and the basic principles in removing it;
- describe the different methods of washing clothes and match their applicability to fabrics characteristics;
- elaborate the need and processes of 'finishing' the washed articles;
- select the correct washing and finishing procedures for the commonly used household articles and garments.

29.3 PREPARATION OF CLOTHES FOR WASHING

You must have noticed your mother going through your pockets, or checking your clothes for any broken buttons or ripped seams before washing them. Why does she do so? She is

simply preparing the clothes for washing. What can happen if things remain in pockets or an item is torn already or a button is loose? Also before you wash any item, you must know the fabric type and how it will behave with the laundry aids — soaps/detergent, other chemicals, water, ironing, etc. You also need to know if the colour is fast and check the kind and amount of dirt on it. Do the following when preparing clothes for washing:-

1. Mending

- If there is any broken seam or tear it should be stitched.
- If there is a hole it should be darned.
- If there is a loose button it should be fixed.

2. Stain Removal

- If there are any stains on the articles, they should be removed before washing. Do you know why? Well, this is to avoid spreading or fixing the stain and staining the other clothes during washing. The details and know-how of methods of stain removal have already been discussed in earlier lesson.

3. Sorting

Articles to be washed should be sorted out. What does this mean? It means you must separate out the cotton, woollens, silks and synthetics. Can you say why? You are right. Different fabrics behave differently while they are wet or while they are being ironed hence they require different treatments while laundering.

- Separate out the coloured articles from the white ones. If you don't do this you know what can happen. If any item bleeds in colour, all the items will get damaged.
- Very dirty articles should be separated from the usual dirty ones i.e. kitchen dusters should not be washed with clothes you wear. Can you say why? Try washing one dirty duster with your shirt and see what happens?

4. Steeping/Soaking

Soaking helps to loosen dirt and hence reduces the time and energy required for washing. Soaking can be done in plain water and in soap/detergent. These days, if you have noticed, most detergent packets give instructions for soaking for $\frac{1}{2}$ hour.

INTEXT QUESTIONS 29.1

(A) State whether following are true or false:

- i) Preparation of clothes is part of laundering.
- ii) Preparation of fabric means matching soap with fabric.
- iii) Preparation also means checking the fastness of colour.
- iv) Mending a cut is not a part of preparation.
- v) Stain removing is the first step of laundering.
- vi) Sorting of clothes is necessary to locate tears and holes in the items.
- vii) Soaking of clothes helps in loosening the dirt.
- viii) Soaking of clothes should be done only in soapy water.
- ix) Soaking of clothes gives best results when done overnight.
- x) Grease stains are best removed using a solvent.

29.4 DIRT

All clothes get dirty on use. Any article to be considered 'dirty', either has a stain on it, which could be any of the stains we have discussed earlier, or it may be dirty with dirt. What is dirt? Dirt is dust particles in the air. Dirt can be of two types:

- a) Loose form of dirt;
- b) Fixed form of dirt.

Loose dirt just settles on the fabric and makes it look dull/dirty. As you know, the loose dirt particles can be shaken off by shaking or brushing. Can you recall what fixed dirt is and how fixed dirt can be removed? When loose dust gets fixed on the garment with water or grease it is called fixed form of dirt. Yes, since the dirt is fixed with grease and water/perspiration, it can be removed only with the help of grease solvents/absorbents and pressure. You have already learnt about grease solvents/absorbents while learning about stain removing.

Let us now learn about pressure and how it is applied in the different washing methods.

29.5 METHODS OF WASHING

As you have realised by now, that washing is a process of removing stains and dirt. There are many methods of washing to suit the characteristics of fabrics. To choose the correct method of washing for an item, it is important to consider the following:

- The size of the article.
- The strength of the article.
- The amount of dirt present.

(I) FRICTION WASHING

Application of Friction

If fabric is strong when wet you can apply friction to provide pressure. There are different ways of applying friction. You can do it with your two hands-rubbing with a brush or a scrubbing board. You can also do it with a stick by beating the fabric, or with the the help of a washing machine. Let us learn about each in more details.

a) **Hand friction:** is like rubbing the fabric with two hands. It is suitable for small items and garments

Experiment: Hand friction

Requirement: A bowl with soap/detergent solution, a dirty handkerchief or scarf.

Procedure:

- Soak the dirty handkerchief/scarf in soap solution for $\frac{1}{2}$ an hour. Observe what happens to dirt on the handkerchief.
- Rub the article with two hands. Pay attention to portions which are extra dirty. Now observe what happens to dirt.
- Rub soap if dirt does not clear off.

Conclusions: Rubbing with hands provides friction to the fabric to release the dirt.

Experiment: Friction with brush.

Requirements: Basin containing soap/detergent in hot water, a brush-soft bristles.

Procedure:

- soak the dirty items in soap/detergent solution for 1/2 hour and observe the dirt.
- spread the dirty item on a plain but hard surface and
- rub/scrub it with a brush to remove dirt. Sprinkle soap water on the item whenever necessary. Now observe the dirt.

Conclusion: Dirt moves out the item when it is scrubbed with brush.

Suitability: Very dirty dusters, hems of sarees, petticoat, collars, cuffs, etc.

(II) KNEADING AND SQUEEZING

This method is used for cleaning articles which are delicate and fine texture or fabrics which are weak and lose strength when wet.

You can apply light pressure by kneading and squeezing the fabrics in soap solution. This method does not require any special apparatus. Remember light pressure on the fabric does not damage the fabric in any way. Procedure is simple—make soap solution in cold or luke warm water and shake it thoroughly to make a lather. Place the article in it, knead and squeeze the parts that are dirty and add more soap, if necessary. Very dirty parts can be lightly rubbed with hand.

First rinse should be done in warm water, this is to remove dirt which has been released due to water pressure. Subsequent rinses can be in warm, cold or hot water depending on the nature of the fabric.

(III) APPLICATION OF SUCTION OR SUCTION WASHING

This method is suitable for cleaning any type of fabrics and of any size. But is specially suitable for large and heavy articles which are delicate and cannot be cleaned with kneading and squeezing method.

Experiment: Suction washing

Requirements: Suction washer, a tub or basin, soap/detergent solution in water enough to accommodate the article to be washed.

Procedure

- Prepare soap solution in a tub/basin and soak, the item to be washed for 1/2 hour. Observe what happens to dirt after 1/2 an hour.
- Work the suction washer up and down in the solution lightly pressing the article and again observe what changes have occurred in the dirt.
- Move the article to change the sides frequently. Continue the process till the article is cleaned.

Conclusions: Suction washer sucks dirt out of the item.

(IV) MACHINE WASHING

Experiment: Use of washing machine for washing.

Requirements: Washing machine, soap/detergent, dirty clothes

Washing Machine: Have you seen a washing machine working? These machines work on the principle of agitating clothes in soapy water. The friction or light pressure is provided mechanically by the machine

Procedure:

Fill the machine with water and wet the clothes. Add soap and switch on the machine. The full cycle of the machine agitates the clothes for about 1/2 an hour to provide the needed friction/kneading and squeezing out. The clothes are then ready to dry out in the sun/shade. If the machine is fully automatic, it takes about 50 minutes to complete the cycle. There are semi automatic machines also which only wet agitate and rinse the clothes - wringing is done manually. Remember that though machine can wash one or two clothes also, it is economical to wash the full load.

29.6 MATCHING METHODS OF WASHING AND MATERIALS TO FABRICS

The following table presents the selection of methods of washing and materials for washing for different fabrics.

<i>Fabric Articles</i>	<i>Cleansing Agents</i>	<i>Water Temp.</i>	<i>Method of Washing</i>
Coarse materials like jharanas, aprons, bath mats etc.	Use borax for very dirty items.	Warm 65°C-80°C	Hand friction or friction with a brush.
Strong white articles-table linen, bed linen, salwars, shirts, trousers.	Any detergent.	Warm 65°C-80°C	• Friction by use of brush at specific areas like collars, cuffs, hems etc.
Coloured articles and fine materials like organdy, muslin, etc.	Any detergent, preferably less alkaline.	Cold water if colour bleeds or otherwise lukewarm (Upto 65°C)	Light pressure i.e. kneading and squeezing.
Heavy articles like curtains, durries, etc.	Use of strong alkaline detergent.	Warm.	Suction washing and/or machine washing.

INTEXT QUESTIONS 29.2

(A) Tick the most appropriate answer.

- i) Loose dirt is
 - (a) dust
 - (b) stain
 - (c) dust and stain
 - (d) neither dust nor stain.
- ii) Washing becomes more effective if clothes are soaked for
 - a) 1/2 hour
 - b) one hour

- c) 1½ hour
 - d) overnight
- iii) White clothes are washed separately from coloured to protect their
- (a) brightness
 - (b) whiteness
 - (c) brightness and whiteness
 - (d) Whiteness and opacity
- iv) The selection of method of washing is not dependent on
- (a) size of the clothes
 - (b) strength of the items
 - (c) amount of dirt present
 - (d) colour of the clothes
- v) Method of friction is matched with the
- (a) nature of fabric
 - (b) colour of fabric
 - (c) size of the item
 - (d) size of the basin
- vi) Hand friction is provided while washing
- (a) small and dirty items
 - (b) large and dirty items
 - (c) dirty items
 - (d) Clean and delicate items
- vii) Kneading and squeezing is used for washing of
- (a) small but dirty items
 - (b) large but dirty items
 - (c) extremely dirty and rough items
 - (d) dirty but delicate items
- viii) Suction washing is used for
- (a) Small and dirty items
 - (b) large, heavy and delicate items
 - (c) small, heavy and rough items
 - (d) large, dirty and heavy items
- ix) For washing items which bleed use
- (a) cold water
 - (b) warm water
 - (c) hot water
 - (d) any of the above

(IV) Finishing

Finishing of washed articles begins with applying of *starch* and/or *blue*. It you remember all white articles are blueed. It helps in restoring their whiteness. Many articles white or coloured are starched. This is to bring back their crispness. Both these processes are important because they give new life to the fabric. Let us learn more about these processes.

i) Renewing whiteness/brightness of the fabric**(a) Experiment: Blueing of white fabrics.**

Requirements: A basin/tub/bucket, water, blue and white article.

Procedure:

- Take water in a basin.
- If it is powder tie $\frac{1}{2}$ teaspoon of blue in muslin cloth and shake this in the water till the colour of the water is pale blue. If it is liquid, add a few drops. Hold some water in you palm. Your palm should be visible through the blue water.
- Open the washed white article and dip it in blue water a few times.
- Wring to remove extra water.
- Shake straight dry in the sun.

Conclusion: The pale blue colours of the blue solution will help in restoring whiteness.

Precautions:

Check if the solution is of right colour.

- Do not add too much of blue and always stir the liquid before putting the article into it.
- Always wet the article before dipping in blue water.
- If the blue solution somehow leaves patches on the surface dip the article in plain water or water containing a few drops of vinegar. The colour will lighten or patches will disappear.
- Blue is always applied in the last rinse.

These days the detergents available in the market also contain a blueing agent in them and if you wash your white articles in these you do not need to apply blue.

In the market you will also find preparations which are called fabric whiteners. These are dissolved in water and the white fabric articles are soaked in it for $\frac{1}{2}$ an hour. The fabric that emerges from here is whiter than before.

Brightening Agent (OBA's)

Certain organic compounds possess the property of fluorescence. This means that they can absorb light at a shorter wavelength and re-emit them at longer wavelength. These are known as **Optical Brightening Agent (OBA's)**. Treating a fabric with an optical/ fluorescent brightener can give it an intense bright whiteness. OBA's however are not a substitute for bleaching.

(ii) Starching

Experiment: Starching of fabrics.

Requirements: Cold water/boiled water starch, bucket/basin

Procedure: (i) To prepare a cold water starch follow this procedure.

Ingredients:	Maida/rice starch	1 teaspoon
	Borax	1/2 teaspoon
	Cold water	1 1/4 cups
	Boiling water	1 teaspoon

- Method:**
- Dissolve borax in boiling water
 - Mix maida/rice starch in cold water.
 - Add borax and strain through a sieve.
 - Leave for 1/2 an hour.

Note: There are preparations of cold starch available in the market. You can use those also. Just follow the instructions.

Suitability: Cold water gives extra-stiffness and instant results. Hence whenever you want immediate results use it. You can apply it on cuffs, collars, frills, front of the shirt, etc.

Usage: Dip the article to be starched into starch solution. Knead and squeeze for some time. Take it out of the starch solution and rub off any starch grains on the surface of the fabric with wet muslin. Iron immediately with a clean hot iron till article is completely dry.

Note: The strength of the starch depends on the thickness/thinness of the item. Thicker the item more concentrated is the starch.

(ii) To prepare boiled water starch follow this procedure

Ingredients:	Maida/arrowroot	1 teaspoon
	Cold water	2 teaspoon
	Boiling water	2-1/2 teaspoon
	Borax	1/2 teaspoon
	Wax	1/2 teaspoon

Method:

- Mix maida/arrowroot in cold water.
- Add borax and wax.
- Pour boiling water over this mixture and stir briskly all the time till the mixture changes its colour and mixture becomes jelly like. Touch this mixture and feel it between fingers.
- Add equal amount of cold water to dilute this starch. This will prevent the starch from becoming a solid lump. When it cools, cover it with a lid to prevent the formation of a film.

If you add a pinch of salt to this starch it will allow free/smooth movement of the iron on the fabric. This is full strength starch. Dilute this starch with more water to suit the need of the fabric.

Use

- Dissolve starch in water in a basin.
- Dip the article and shake it in this solution for some time.
- Wring to remove extra water.
- Dry in sun or shade depending on if it is white or coloured.

(ii) To prepare gum water use following procedure.

Ingredients: Gum 100 gms
Water 2 cups

Method:

- Soak gum in water overnight.
- Stand the container in hot water to dissolve the gum. Stir occasionally.
- Strain through muslin and bottle.

Suitability: Gum water is a suitable stiffening agent for silks.

Use: Add 1 tsp of gum water in 1/4 bucket of water and shake to dissolve.

- Rinse the article to be starched and squeeze extra water.
- Wring gently and dry in shade.

Refer to following table to decide the strength of starch for any article

Full strength of starch (cold, hot water starch or gum water)	Cold Water	Article (cotton and silk)
1 Part	1 Part	Caps and hats
1 Part	2-3 Parts	Table linen, cotton dupatta, cuffs, frills, collars.
1 Part	4 Parts	Thin curtains, blouse, salwar, napkins.
1 Part	5 parts	Thick curtains, aprons, sheets, pillow slips, sarees.
1 part	6 Parts	Kurtas, Sarees, shirts.

(iii) **Drying**

Once you have washed, blued and starched the clothes these must be dried. How and when should you dry? Drying can be (i) outdoor (ii) indoor

Let us know more about these.

- Outdoor drying:** Best place to dry clothes is outside in clean air and sunshine. A clothes line/cord can be used for this purpose.
- Indoor drying:** Drying clothes in rainy season is always a problem which can be solved by arranging for a rack which can be put in any airy corner of the house. These can be folding racks made of aluminium which can be used both indoor and outdoor. Some fabrics need to be dried flat on the floor, because if you hang them, they get out of shape. e.g. wool, lace, knitted material etc.

Once the clothes are dry, they need to be ironed or pressed. Why do we iron our clothes? Yes, because clothes get creased while washing. These creases make the article look untidy. There are various processes to remove these creases, and the selection of the correct process depends on the nature of the fabric.

- Ironing:** It is a process of removing creases from fabrics to give them a fresh look. To get best results of ironing, the fabric must be damp. You can damp the articles which are complete dry, by sprinkling water on them. Get best results by doing the following :

- use warm water instead of cold.
- first damp the seams, hems and pleats and then the rest of the item.
- spread the cloth on the table and then sprinkle water, roll up the article tightly in a towel and keep it away for 15 minutes.

All these help in easy spreading of water and making the fabric evenly damp.

Can you name the essentials for good ironing? Yes, you are right. For good ironing you need a clean, hot iron and a padded but hard surface big enough to accommodate the article to be ironed. Ironing boards are available in the market. Electric irons are available in various designs and weights. You must have also seen thermostatic control on the iron. This is to control the temperature of the iron to suit it to the needs of different fabrics. Besides some irons have an arrangement of producing steam on the fabric. These are called steam irons.

Experiment: Ironing:

Requirements: Plain, hard but padded surface, iron, a bottle of water and a wash cloth/handkerchief.

Procedure:

- Spread the damp creased cotton article on the padded surface and ease out the creases as much as possible.
- Heat iron to hot temperature.
- Slide it lengthwise on the article spread already on the padded surface.

You will see that as you slide the hot iron on the damp surface of the fabric the creases disappear. The steam produced due to dampness of the fabric and heat of the iron helps in removing the creases. The fabric will dry due to the heat of the iron and will not crease back.

(v) Pressing

Pressing is a process of removing creases from the fabric by placing hot iron on the creased position and lifting it and placing it again. Usually a damp cloth is in between the fabric and the iron. The steam coming out of it helps in removing the creases.

Experiment: Pressing

Requirements: Plain hard but padded surface, muslin cloth and an iron.

Procedure:

- Put the creased article on the padded surface.
- Spread damp muslin cloth on the creases.
- Place hot iron on the crease covered with damp muslin cloth and let the steam spread on the creased item.
- Lift the iron and place it on adjoining areas. Cover the whole article in the same manner.

Precaution: Lift and place the hot iron, do not slide. Air the item to remove any dampness.

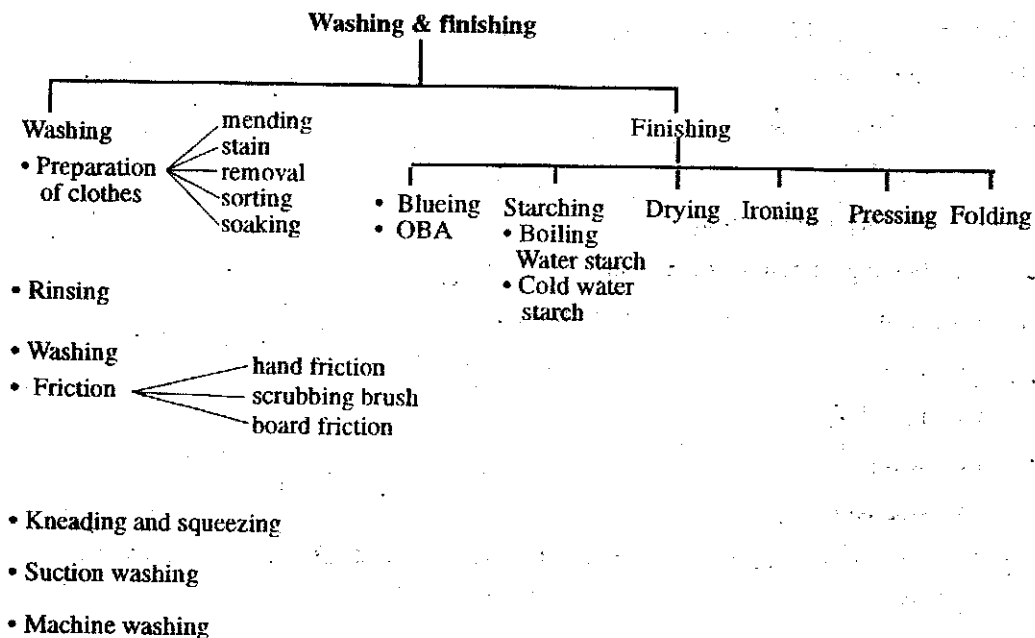
- (vi) **Folding:** The last step of finishing is folding the article or putting it away on a hanger. Right folding is important because it gives folds/creases in right places. Also folding helps in proper storage of the items.

INTEXT QUESTIONS 29.3

(A) Tick the most appropriate answer:

- 1) Finishing means
 - a) blueing
 - b) starching
 - c) blueing and starching
 - d) blueing, starching and ironing
- 2) Blue is applied at the time when clothes are
 - a) soaked
 - b) rinsed
 - c) washed
 - d) starched
- 3) If you want free and smooth movement of the iron on starched items add in the starch $\frac{1}{2}$ teaspoon of
 - a) borax
 - b) salt
 - c) maida
 - d) wax
- 4) To avoid forming of lumps in boiling water starch add
 - a) $\frac{1}{2}$ tsp of borax
 - b) 1 tsp of maida
 - c) equal amount of cold water
 - d) two spoons of warm water.
- 5) Ironing is most effect when
 - a) iron is hot and cloth is damp
 - b) iron is luke warm and cloth is damp
 - c) iron is luke warm and cloth is dry
 - d) iron is hot and cloth is dry.
- 7) To avoid certain fabrics getting out of shape, they should be dried
 - a) on the clothes line/cord
 - b) on the rack inside
 - c) flat on the floor
 - d) while ironing.

29.6 WHAT HAVE YOU LEARNT



29.7 TERMINAL QUESTIONS

1. a) What do you understand by saying preparation of clothes for washing?
b) List in sequence the steps required for preparation of clothes before washing and give details of any one.
2. Your dress gets dirty, how will you identify whether it is loose or fixed dirt?
3. Name the various methods of washing and explain the method needed for cleaning articles which are delicate and of fine texture.
4. List the cleansing agent and water temperature for the following:
 - i) Organdy
 - ii) Pants
 - iii) Bath towels
 - iv) Furnishing material.
5. What do you understand by the term finishing?
6. List in sequence the various methods of finishing a coloured cotton garment and a white silk garment?

29.8 ANSWERS TO INTEXT QUESTIONS

- 29.1** A) i) (T), (ii) (T), (iii) (T) (iv) (F), (v) (F), (vi) (F), (vii) (T), (viii) (F), (x) (F), (x) (T).
- 29.2** (i) a, (ii) a, (iii) d, (iv) d, (v) a, (vi) a, (vii) d, (viii) b, (ix) a
- 29.3** (1) c, (2) d, (3) c, (4) c, (5) a, (6) d, (7) c