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27

CARE AND MAINTENANCE

We all know that clothes, with use, get dirty. They have to be washed, dried and ironed regularly for their long life, neat appearance and also for personal cleanliness and cleanliness of the environment. Hence, it is important to take care of our clothes.

You may also know that all fabrics are not washed and finished in the same way. For some fabrics you use hot water, while others are washed only in cold water. Some are washed with detergents while others with mild soaps. Some are hung on the clothesline, others are dried flat on the ground and so on. This means, different fabrics have to be given different care while washing.

Let us find out what these methods are and how to take care of various types of fabrics.

OBJECTIVES

After reading this lesson you will be able to:

- state the need for taking care of clothes and meaning of laundering and dry cleaning;
- explain the basic steps of laundering;
- describe the soaps and detergents;
- list various auxillaries and state their use;
- describe the procedure of removing different stains from different fabrics;
- elaborate different methods of washing and state their suitability to fabrics;
- list the precautions to be taken while storing clothes;
- explain the process of dry cleaning.

27.1 TAKING CARE OF CLOTHES

The first questions we must answer is, why do we need to take care of clothes? Well, we all know that when we wear clothes they become dirty due to the dirt, grease, perspiration, etc. Clothes look ugly if those are allowed to remain on the fabric. They also tend to loose their strength and stains can get fixed on the fabric. The dry dirt can be easily shaken off the clothes, but greasy dirt requires a special treatment.

27.2 MEANING OF LAUNDERING

Most of us think that "laundering" means only washing of clothes. But actually it includes washing as well as proper drying and finishing.

Laundering: Washing, drying and finishing of clothes.

Dry cleaning : Some clothes cannot be washed. These are cleaned by using solvents and/or grease absorbents. In other words, clothes are cleaned without the use of water which may damage the fabric or colour of the fabric. You will learn more about dry cleaning in the last part of this lesson.

27.2.1 Steps in Laundering

When you wash clothes at home how do you start? Probably you separate them according to coloured/white, cotton/wool/silk and less dirty/more dirty?

You do this, as you know that all types of clothes can not be washed together. Some preparatory steps are done to make washing more methodical. They are as follows:

i) **Mending:** Articles to be laundered are first examined carefully for any tears, or missing or loose buttons. They need to be stitched before washing. Can you say why?

ii) **Stain removal:** If there are some stains or marks of discolouration other than the dirt present on the articles, they should be removed or they might spread, get fixed or stain other fabrics in washing.

Fig. 27.1 : Stain Removal

iii) **Sorting:** Articles to be washed should be sorted out on the basis of the fibre type i.e., cotton, woolens, silks, and synthetics; whites should be washed separately from coloured ones. Also, very dirty articles like dusters should be washed separately from cleaner clothes.

Fig. 27.2 : Soaking

iv) **Soaking:** Do you soak your clothes before washing? Why do you do it? Soaking helps to loosen the dirt from the fabrics, and this makes washing easier. All fabrics cannot/ need not be soaked. For example, clothes which do not have fast colour should not be soaked. Woolens are not soaked because soaking leads to felting.

v) **Washing :** Clothes are now washed using appropriate detergent/soap and also the right method of washing. You will learn about both these in detail in the next unit of this lesson. Process of washing helps in releasing the dirt from the fabric.


Fig. 27.3 : Rinsing

vi) **Rinsing:** All soap/detergent and/or chemicals used must be removed from the fabric. Hence clothes are rinsed 2-3 or 4 times using fresh water everytime. In fact rinsing should continue till all soap/detergent is removed.

vii) **Starching and/bluing**: Clothes must be starched if they need to be starched and also blued to return their whiteness. The detailed process will be explained in the next section.

viii) **Drying**: You proably know that clothes are dried differently. White clothes are dried in sun and cloured clothes are dried in shade. Silk, white or coloured, are dried in shade. Synthetics are dried on hanger and in shade. Woolens are dried in shade and flat on the floor.

ix) **Ironing and Pressing**: The last step of laundering is ironing. Clothes are ironed according to the nature of the fabric. Cottons are sprinkled with water and ironed using hot

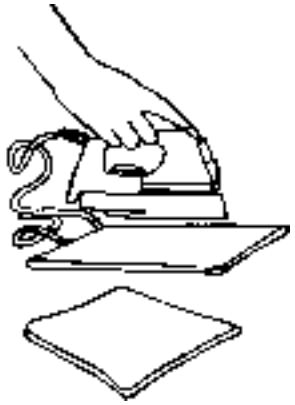


Fig. 27.4 : Ironing and Pressing

iron - Silks are brought in while damp and ironed with hot iron. Synthetics and rayons are ironed with moderately hot iron. Woolens are pressed with hot iron but over a damp muslin.

INTEXT QUESTIONS 27.1

1. Write short notes on

   i) Sorting : .....

   ii) Washing and Rinsing : .....

   iii) Ironing and Pressing : .....

27.3 DETERGENTS

A detergent is a product which is capable of cleaning. Detergents can be of two types: soaps and syndets.

a) **A soap** is a cleanser obtained from mixing of natural oil/fat and waxes.

b) **A syndet** is a cleanser produced synthetically from chemicals.

In your daily life you must have had experience of working with soaps. You must have observed the various properties of soaps. Soaps are good cleansers. But you know syndets are even better. Both the cleansers act by helping penetration of water into the fabric by reducing the surface tension of water.

But **differences** are there

i) As you know that soaps **wet** the fabric more readily than water but syndets acts even more readily than soaps.

ii) Also you must have observed that **dissolving** soaps in cold water is more difficult than dissolving it in hot water but syndets are soluble in both cold and hot water.

iii) Syndets have a good cleansing action even with hard water while soaps foam well only in soft water.

iv) Soaps do not have a distinct **smell** but syndets are sweet smelling. Hence clothes also smell nice when washed with syndets.

(v) Blueing has to the done after washing with soaps but syndets have blues and optical brightnes already added to them.

vi) You must have observed that your clothes tend to look dull after few washes with soap. It is because soap leaves soapy deposits on the fabric. This makes clothes look dull in due course of time. Syndets do not leave any deposits on the fabric.

vii) Soaps are cheaper than the syndets but if clothes become dull after few washes, what is the use! Hence syndets are more economical in the long run.

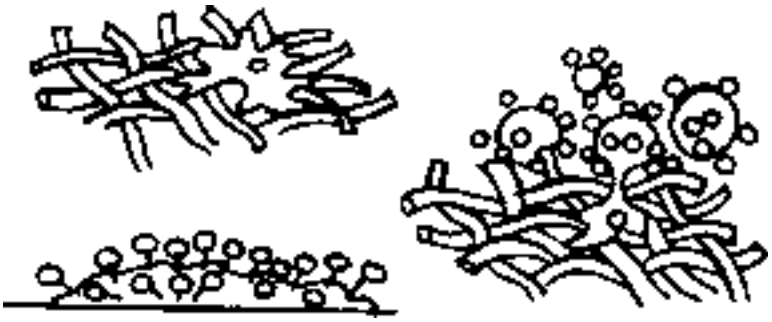


Fig. 27.5: Removal of dirt by detergents

INTEXT QUESTIONS 27.2

1. State whether the following statements are true or false and write the correct response for false statement.
   i) Soaps and syndets are detergents.
   ii) Raw material for all cleansers are available in nature.
   iii) Syndets have deeper penetrating action than soaps.
   iv) Use of syndets makes the fabric appear grey and dull.

27.4 AUXILLARIES

What do you do after cleaning the fabric with soap or a syndet? What do you do with your white cottons to 'retain their whiteness'? What do you do to make the cottons more crisp or why do you give your silks for 'Charakh'? So, this makes it very clear that besides cleaners there are other things required while laundering which will give new life to your fabrics. Such substance are called auxillaries. Can you define an auxillary in laundering? See the following box.

> Products other than the cleansers, required to give good finish to the fabrics during the process of laundering are known as Auxillaries.

Can you now list some of the auxillaries in laundering?

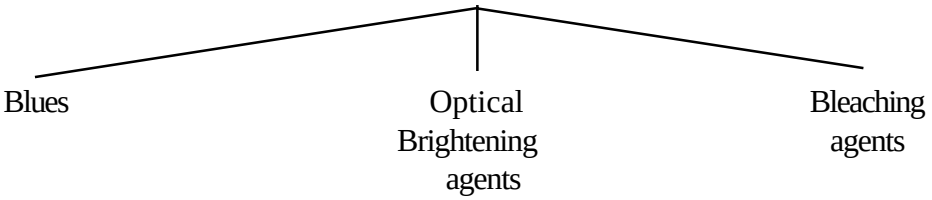
These are

- Blues
- Optical brightening agents
- Chemical bleaches

- Stain removing agents
- Stiffening agents.

Have you ever noticed that after 2-3 wears and washings your white cottons and linens lose whiteness and get a yellowish tint. You probably apply blue to counter-act the yellowness of the fabric. You should know that besides blues you can also use bleaching agents and optical brightening agents.

Therefore, yellowness of white fabrics can be removed by



A. Blues

A blue is defined as a chemical used as a fabric whitener. It is obtained from chemical, vegetable and mineral sources and is available in the market in powder or liquid form. There are many types of blues and their colour varies from violet to blue to bluish green. Wherever blue has to be applied–

- it should be applied just before the last rinse
- the blue water should be mixed thoroughly before putting fabric into it.

This will help avoid formation of blue speckles on the fabrics and helps in even application of blue, eg., ultra marine blue and prussian blue.

B. Opticals Brightening Agents/Flouroscent Brightening Agents (OBA's/FBA's)

Have you ever read the contents or list of ingredients written on the packet of syndet? You will come across OBA or FBA. Also, in the market, ask specifically for OBA's, they are available with very famous brand names.

Optical brightening agents are colourless dyes. They are fluorescent compounds which give very bright colours when applied to the fabric and dried in the sun.

These OBA's absorb light from the ultraviolet region and reflect back in the visible region. This reflected light has the effect of counteracting the yellowness, thus brightening the whiteness of the fabric. All clothes start looking whiter than white. There is no chemical action so it has no harmful effect on fabrics.

C. Chemical Bleaches

You must have seen on television various advertisements of bleaches. Do you

know what are these, what is their composition and how they make fabric whiter and brighter? Bleaches can be defined as

> ***A bleaching agent is any material or compound that whitens or brightens the fabric through chemical action. This action may be oxidizing or reducing.***

These bleaches help in removing colouring matter from fabrics. These are also used as stain removal agents.

Bleaches are of two types:

a) Oxidising bleaches.

b) Reducing bleaches.

a) Oxidising bleaches

These bleaches leave an almost permanent effect. These are used widely for application on vegetable fibres like cotton and linen. Examples of oxidizing bleaches are:

i) Sun light – It is the oldest and most simplest method of stain removal. Wet the stain and put on grass. Chlorophyll, moisture and oxygen from air bring about bleaching of the stain.

ii) Javelle Water (Sodium hypochlorite Na_2CO_3)

They should always be diluted before use. The fabric should be in bleach till the stain is removed. Further, the fabric should be rinsed to remove any remaining bleach in the fabric as it may harm the fabric by weakening it.

iii) Potassium permanganate ($KMnO_4$) and Oxalic acid

Used for stains caused by dyes, mildew, pespiration and ink. The brown stains (which may be caused due to any reason like rust, or stains caused due to paan) can easily be removed by oxalic acid and by combination of $KMnO_4$ and oxalic acid.

iv) Hydrogen Peroxide (H_2O_2)

It is a universal bleach applied on both vegetable and animal fibres. Therefore it is a safe bleach for the silks, woolens and rayons as it has no harmful effect on animal fibres. Always store H_2O_2 in dark bottles, otherwise it does not remain effective.

b) Reducing Bleaches

Reducing bleaches are less strong in action than oxidizing bleaches and are applied on animal fibres like wool and silk. These bleaches do not have permanent effect on the fabric. Wool and silk sometimes turn yellow when they come in contact with air after bleaching with reducing bleaches.

This happens because wool and silk are animal fibre. Reducing bleaches are applied to make them pure white and when these fabrics come in contact with air slowly and gradually they turn yellow and loose their bleaching effect.

Examples of reducing bleach

i) Sodium Hydrosulphite

ii) Sodium Bisulphite.

INTEXT QUESTIONS 27.3

1. State whether the following are true or false and write the correct response for the false statement.

   a) The fabric should not be rinsed with water after bleaching and the bleach should be allowed to remain in it.

   b) Bleaches whiten or lighten the fabric by chemical action.

   c) Sunlight and moisture have bleaching effect on the fabric.

   d) Hydrogen peroxide can be safely applied on animal fibres.

2. Give one word for the following statements.

   a) A chemical compound which is capable of removing colouring matter from fabric making them whiter and brighter.

   b) The oldest and cheapest method of stain removal.

   c) A bleaching agent which is used to remove brown stains from the fabric.

   d) A bleaching agent which can be safely applied on animal as well as vegetable fibre.

   e) Pure white wool and silk turn yellow in colour in due course of time due to application of this bleach.

27.5 STAIN REMOVAL

Stains are marks other than dirt on clothes. For example, you may get a curry or pickle mark on your shirt while eating or an ink stain while writing, or a paint stain

if you accidently come in contact with a newly painted door. Such marks are called stains and if allowed to stay for long they make the clothes look ugly.

Fig. 27.6

27.5.1 How to identify a Stain?

In order to decide which procedure to use for stain removal it is important to identify the stain first. For this, one has to see the following:

a) Colour: Every stain has a specific colour, for example, curry and pickle are yellow while coffee and tea stains are brown, grass stain is green.

b) Smell: Some stains have a peculiar smell eg., stains of eggs or paints. These stains can be recognized by the smell.

c) Feel: Some stains also change the feel of the fabric and can be recognized on that basis. For example paint or sugar syrup makes the fabric stiff to touch, whereas lipstick or shoepolish make the fabric feel slippery.

Activity 27.1 : Stain some fabrics with lipstick, nailpolish, ink, shoepolish, curry, pickle, milk, blood, etc. Shuffle them and then try to identify them by studying the colour, smell and feel. Record your findings in the following table.

S.No	Observation	Stain
1.	Colour ..... Smell ..... Feel	
2.	Colour ..... Smell ..... Feel	

Stains can be put in following categories and similar methods can be adopted to remove stains from each group:

1. **Vegetable stains**-like curry, tea, coffee
2. **Animal stains**-like milk, blood

3. **Grease stains**-like pickle, curry, shoe polish, etc.
4. **Mineral stains**-like rust
5. **Grass stain**
6. **Miscellaneous stains**-dyes

27.5.2 Methods of Stain Removal

Fig. 27.7: Dipping

Fig. 27.8: Sponging

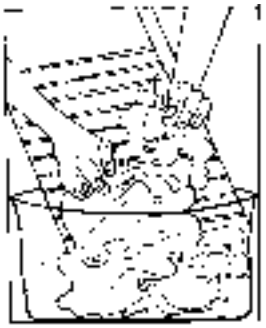


Fig. 27.9: Drop method

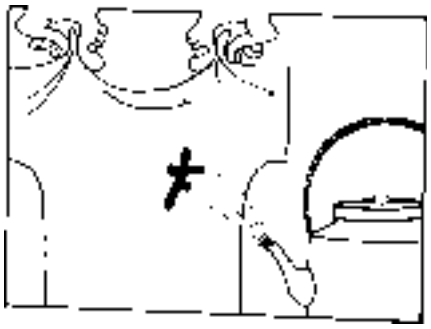


Fig. 27.10: Steaming

27.5.3 Precautions While Removing Stains

Stains should be removed very carefully. If some general precautions are not observed, there might be a damage to the fabric itself. So whenever you have to remove a stain, do the following:

1. As far as possible, remove the stain when it is fresh.
2. Find out whether the stained fabric is cotton, wool, silk, or synthetic.
3. Try to identify the stain.

4. For unknown stains, start the stain removal with a simple process and then move on to a complex one. Always wash the stain with cold water first as protein stains like blood and egg coagulate with hot water and became difficult to remove.
5. Chemicals used should not damage the fabric.
6. For delicate and/or coloured fabrics try out the chemical on a small portion of the fabric first. In case the fabric is damaged do not use it.
7. Repeated use of a milder reagent is better than a one-time use of a strong reagent.
8. Wash all fabrics with soapy solution at the end to remove all traces of chemical from it.
9. Dry fabrics in the sun as sunlight acts as a natural bleach.

Table 27.1
Stain removal for different stains

Stains	White Cottons	Coloured Cottons	Silk and Woollens	Synthetics/nylons polyester, acrylic
Tea/ Coffee	*Fresh* Pour boiling water on the stain. (2 cups of water + ½ teaspoon of borax)	Soak in warm water and borax	Same as for coloured cottons	Same as for coloured cottons
	Old Dip the stain in glycerine	Same as for white cottons	Pour hydrogen peroxide solution and gently rub to remove the stain	Dip in warm water and a few drops of sodium perborate till the stain is removed
Blood/ Egg/ Meat	*Fresh* Wash with cold water and soap	Same as for white cottons	Same as for white cottons	Same as for white cottons
	Old Wash with salt water (2 tablespoons of salt + ½ bucket of water).	Same as for white cottons	Same as for white cottons	Same as for white cottons

Butter/ Ghee/ Oil/ Curry	*Fresh* Wash with hot water and soap *Old* Make a paste of soap and water and apply it on stain. Leave in sunlight until stain is removed	Same as for white cottons Same as for white cottons but leave in shade not in sunlight	Wash with water and soap Same as for white coloured cottons, but use a mild soap	Same as for silks and woollens Same as for silks and woollens

Note: When stain is fresh, apply talcum powder on it and leave it for a few hours. Brush off powder. This helps to remove the stain and can be used for all fabrics.

Paint/ Shoe polish/ Nail polish/ Lipstick/ Ball Pen	*Fresh* Scrape out all excess stain Rub gently with spirit or kerosene. *Old* Repeat the above method two or three times	Same as for white cottons Same as for white cottons	Same as for white cottons Same as for white cottons	Same as for white cottons Same as for white cottons.
Grass	*Fresh* Wash with soap and water *Old* Dip the stained portion in methylated spirit	Same as for white cottons Same as for white cottons	Same as for white cottons Same as for white cottons	Same as for white cottons Same as for white cottons

Betel leaf (paan)	*Fresh* Apply a paste of onions and leave in sunlight	Same as for white cottons but leave in shade	Same as for coloured cottons	Same as for coloured cottons
	Old Repeat above method two or three times	Same as for white cottons	Same as for white cottons	Same as for white cottons
Mehndi	*Fresh* Dip in warm milk for half an hour	Same as for white cottons	Same as for white cottons	Same as for white cottons
	Old Repeat the above 2 or 3 times	Same as for white cottons	Same as for white cottons	Same as for white cottons

Remember: It is important to wash the fabric well after the stain is removed so that all the chemicals used are completely removed.

INTEXT QUESTIONS 27.4

1. For removing each of the following stains, choose the most appropriate method out of the four given:

   i) Old tea stain on a white cotton fabric–

   a) Use salt water
   b) Soak in glycerine
   c) Soak in lime juice
   d) Pour boiling water

   ii) Old blood stain on a coloured cotton fabric–

   a) Use salt water
   b) Soak in glycerine
   c) Soak in hot water
   d) Wash with hot water and soap

   iii) Lipstick stain–

   a) use salt water
   b) Soak in glycerine
   c) Soak in methylated spirit
   d) Wash with hot water and soap

   iv) Rust stain–

   a) Use salt water
   c) Soak in methylated spirit

b) Use lime juice and salt
d) Wash with soap and cold water

v) Fresh butter stain on silk–
   a) Wash with cold water
   b) Wash with cold water and soap
   c) Apply salt and leave in the sun
   d) Wash with warm water and soap

vi) Nail polish stain on a polyester fabric–
   a) Soak in methylated spirit
   b) Soak in warm water
   c) Soak in cold water
   d) Soak in warm water and soap

vii) Fresh ink stain on a woolen fabric–
   a) Wash with cold water and soap
   b) Wash with boiling water and soap
   c) Use salt and lime juice
   d) Soak in methylated spirit

27.6 METHODS OF WASHING

After you have mended the clothes, removed the stains, sorted and steeped the clothes, the actual washing starts. You know that some portions like cuffs and collars need extra rubbing because they become more dirty.

Fig. 27.11

Properties of fibres should be kept in mind while laundering them. Do you remember that cotton becomes stronger when wet while rayon loses its strength? That is why one can wash cottons by rubbing while rayons have to be treated gently. Also, wool and silk need special care as woollens lose shape in water and silk loses strength.

Thus, while selecting the method of washing two main factors need to be considered.

i) How dirty is the fabric and

ii) What kind of fabric it is i.e. cotton, silk, wool, rayon, nylon and so on.

Laundering is generally done by:

i) Friction washing

ii) Suction

iii) Kneading and squeezing

iv) Washing by machines

Let us now discuss these methods in detail.

(i) Friction Washing

This method is suitable for washing strong fabrics like cotton. Friction can be applied as follows:

a) By hand: This means rubbing vigorously with the hand. It is suitable for cleaning very soiled small articles like small garments, handkerchief, etc. It is economical in the use of soap.

b) With a plastic scrubbing brush: with a scrubbing brush friction is applied by placing the dirty article flat on a hard surface. It is suitable for very soiled household articles made of strong fabric, for example, dusters.

c) Beating with a stick: Large articles like bedsheets, etc., are washed by this method.

(ii) Suction Washing

This method is used for articles like towels, etc., which are heavy and have a pile weave, on which a brush can not be used.

The article is placed in soap solution in a tub and the suction washer is pressed down on it and lifted repeatedly. The vacuum created by pressing losens the dirt particles.

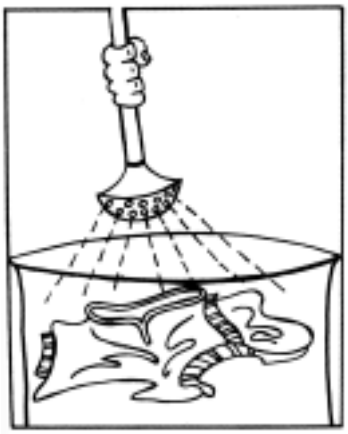


Fig. 27.12: Suction Washing

(iii) Washing by Kneading and Squeezing

Fig. 27.13: Washing by kneading and squeezing

This method is used for delicate fabrics like silk, woolens, rayon, etc. This method does not damage the fabric or change its shape as only gentle rubbing with hands is applied.

(iv) Washing by Machines

Washing machine is a labour saving device especially useful for large institutions. Now-a-days it is being used at home also. The washing time varies with types of fabrics and amount of soiling. Woollens take less time than cottons to get cleaned. The instructions with the machine should be read carefully before using it.

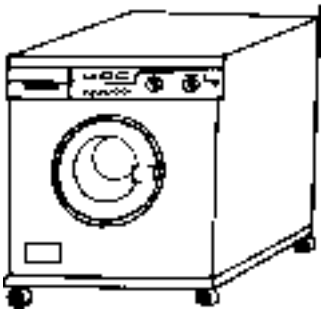


Fig. 27.14: Washing by machines

The detailed procedure of laundering specific fabrics is given in a chart on the following page.

27.8 STORAGE OF TEXTILES

Till now we have taken proper care in keeping our clothes clean but it is not sufficient. If we don't store these clothes properly, they can get damaged by insects or cloth moths.

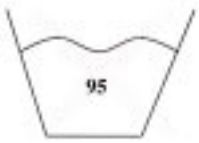
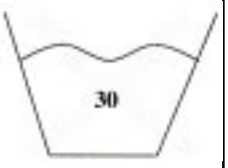
Let us list a few precautions in order to save our expensive clothes:

1. Empty out pockets and brush the garments thoroughly in order to free them from dust.
2. Always sun and air the garments which have been worn before storing.
3. Do not let garments become too dirty before laundering or dry cleaning.
4. Do not store any damp clothes as moisture causes mildew. You must have seen that clothes have changed colour when taken out from closets and this is the reason for it.
5. All textiles should be protected from insects. This can be done by using repellents like tobacco, dried neem, camphor, moth balls, etc., as you all do at home. Woollens can be packed in newspapers as the moth dislikes printer's ink. Boxes may be lined and covered with paper. Even driedreem leaves, sandal-wood dust, dry eucalyptus leaves are good as long as the odour lasts.

	Soaking	Washing	Rinsing	Stiffening	Blueing	Drying
Fabric	Soaking helps to loosen the dirt. Soak whites and very dirty clothes separately. • Use sufficient water for soaking. • Use warm to hot water for dirty articles. • Do not put too many clothes together. • Soak only for an hour or two and not overnight. • Do not soak coloured clothes at all, as colour gets affected.	• Use warm to hot water for very dirty and white articles. • Use cold water for coloured clothes. • Use friction method. • Rub hard with hand or brush at very dirty areas. Avoid very hard brush as it may damage the fabric. • For embroidered cottons wrap a cloth around the brush and then apply friction on the fabric. This makes brush action milder.	• After washing rinse the articles thoroughly, i.e. put the articles in water as many times as necessary to remove the soap completely. • Use cold water for rinsing.	Starch is used as a stiffening agent for cottons. All cottons except undergarments and close fitting garments like blouse are stiffened; Starched cottons appear smooth, shinning and fresh. They do not get dirty easily. To starch, add some of the starch paste in a basin of water and mix well. • Open the article, wet in water and then dip in the starch solution. • Squeeze the article well and hang it in sun to dry. • For heavily starched articles do not squeeze them hard.	Blueing is done only for white articles. You must have seen that white clothes tend to look yellow, so blueing is done to make them look white again. To blue - A teaspoon or so of the washing blue is tied in a thin cloth. In liquid form, add few drops of it to water. Stir the water well in both cases. Open the article and dip it in blue solution. Then squeeze and dry in the sun. **Note:** If articles are to be starched and blued, then blue can be added to the starch solution itself. If the article gets over blued dip it in plain water with a few drops of vinegar or lime juice then extra blue gets removed.	• Hang the clothes by the strongest point near the line. • Whites are dried in sun. • Cloured articles are dried in shade. • Heavy coloured clothes can be dried in sun but with wrong side facing out. **Note:-** Pick up the articles drying in sun as soon as they are dry as over- exposure to sun can weaken the fabric and cause yellowness.
Silk	• Do not soak as they lose strength when wet. • Use mild liquid soap or reetha nut solution in a tub of water and make a lot of lather.	• Use luke warm water as it helps to remove dirty easily. Do not use hot water. • Use light pressure for washing.	• Rinse out all soap in cold running water. Do not squeeze hard. • Add a few drops of vinegar or lime juice in the last rinse. This adds lustre to the fabric.	• Add gum water along with vinegar in the last rinse.		• Small articles can be rolled in a hand towel to remove excess water and ironed at once. • Large articles like sarees may be placed on the clothesline in the shade, till all the excess water is removed. Do not dry completely before ironing.
Woolens	Do not soak. *Important :* Before washing place the article on a paper spread on a flat surface and draw its outline.	• Use mild liquid soap or reetha-nut-solution in a tub of water and make lot of lather. *Note:* Do not use reetha-nuts for whites. • Use luke warm water as it helps in removing dirty easily. Do not use hot water. • Use light pressure for washing.	• Rinse out soap in cold running water. • Do not squeeze hard			• Place article back on the paper on flat surface and pull it into the shape of the original outline drawn. • Leave on flat surface, in shade, to dry. • Steam press if the article requires ironing. Place wet cloth on the dried woolen article and press it with a hot iron on top.
Synthetics **Nylon** **Polyester** **Acrylics**		• Use lukewarm or cold water. Hot water is not used as these get damaged by high temperature. They melt easily and can lose their shape when exposed to heat. • Use any good soap. • Use light pressure and light rubbing while washing.	• Rinse well in cold running water to remove soap completely. To avoid wrinkles do not squeeze.			• Dry preferably on a hanger to maintain the original shape. • When dry, iron only if necessary, with a warm iron and not a hot one as synthetics get damaged at high temperature.

Now, you are hopefully competent to increase the life span of your clothes. Whenever you wear and change your clothes remember what is required so as to avoid further problems. Here are some symbols you might find on labels that would help you take good care of your clothes.

Table 27.2 : Care symbols for machine wash

Care Symbol	*Agitation Washing Temperature*	*Rinse*	*Spinning/ Wringing*	*Examples of Application*
 **Fig. 27.11 Very hot**	maximum	normal	normal	White cotton and linen articles without special finishes
 **Fig. 27.12 Hot**	maximum	normal	normal	Cotton, linen or viscose articles without special finishes where colours are fast at 60°C
 **Fig. 27.13 Hand hot**	medium	cold	short (reduced) spin	Nylon, polyester/cotton mixtures; polyester cotton and viscose articles with special finishes, cotton/acrylic mixtures
 **Fig. 27.14 Warm**	maximum	normal	normal	Cotton, linen or viscose articles, where colours are fast at 40°C but not at 60°C
 **Fig. 27.15 Cool**	medium	cool	short (reduced) spin	Silk and printers, acetate and triacetate; including mixtures with wool; polyester/wool blends

Washing Temperatures

1. Water heated to near boiling temperature. 3. As hot as the hand can bear. 5. Cool	2. Hotter than the hand can bear. The temperature of water coming from many domestic hot taps. 4. Pleasently warm to hand.

Fig. 27.15 : Do not machine wash

Fig.27.16 : Do not wash

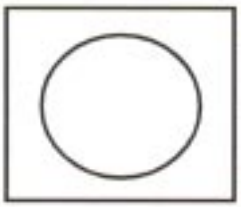


Fig.27.17 : Tumble dry

Fig.27.18 Drip dry

Fig.27.19 : Line dry

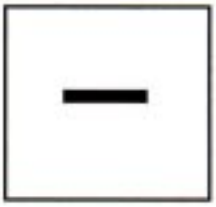


Fig.27.20 : Dry flat

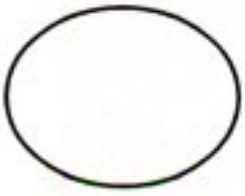


Fig.27.21 : Dry cleanable

Fig.27.22 : Do nt dry clean

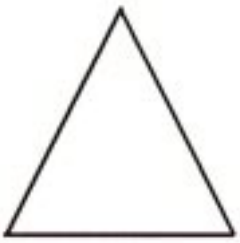


Fig.27.23 : Can be bleached

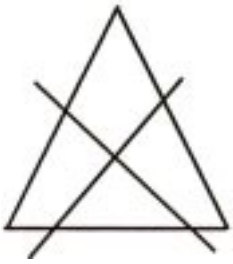


Fig.27.24 : Do not bleach

INTEXT QUESTIONS 27.5

1. Fill in the blanks using the most appropriate words from those given in brackets:

   i) Clothes must be _____ before washing.
   (dried, mended, ironed, starched)

   ii) _____ articles should not be soaked before washing.
   (coloured, white, dirty, small)

   iii) Soaking of clothes helps to _____ dirt.
   (increase, decrease, loosen, prevent)

   iv) Starching is done to give cotton clothes a _____ look.
   (dull, shining, rough, yellow)

   v) _____ should not be starched.
   (table linen, sarees, kameez, undergarments)

   vi) Coloured cotton articles should be dried in the _____.
   (sun, shade, daylight, night)

   vii) Overexposure to sunlight makes fabric _____.
   (bright, dull, blue, yellow)

   viii) Ironing should not be done directly on the _____.
   (collars, cuffs, sleeves, buttons).

   ix) When cotton articles are stored wet, they develop _____.
   (dullness, brightness, mildew, smoothness)

2. What do understand by the following symbols?


(i)


(ii)


(iii)


(iv)

27.9 DRY CLEANING

This is another method of taking care of clothes. Your expensive and delicate silk and woolen garments need to be drycleaned. In drycleaning, instead of ordinary washing, the dirt is removed by a solvent action and grease absorbents. The ad-

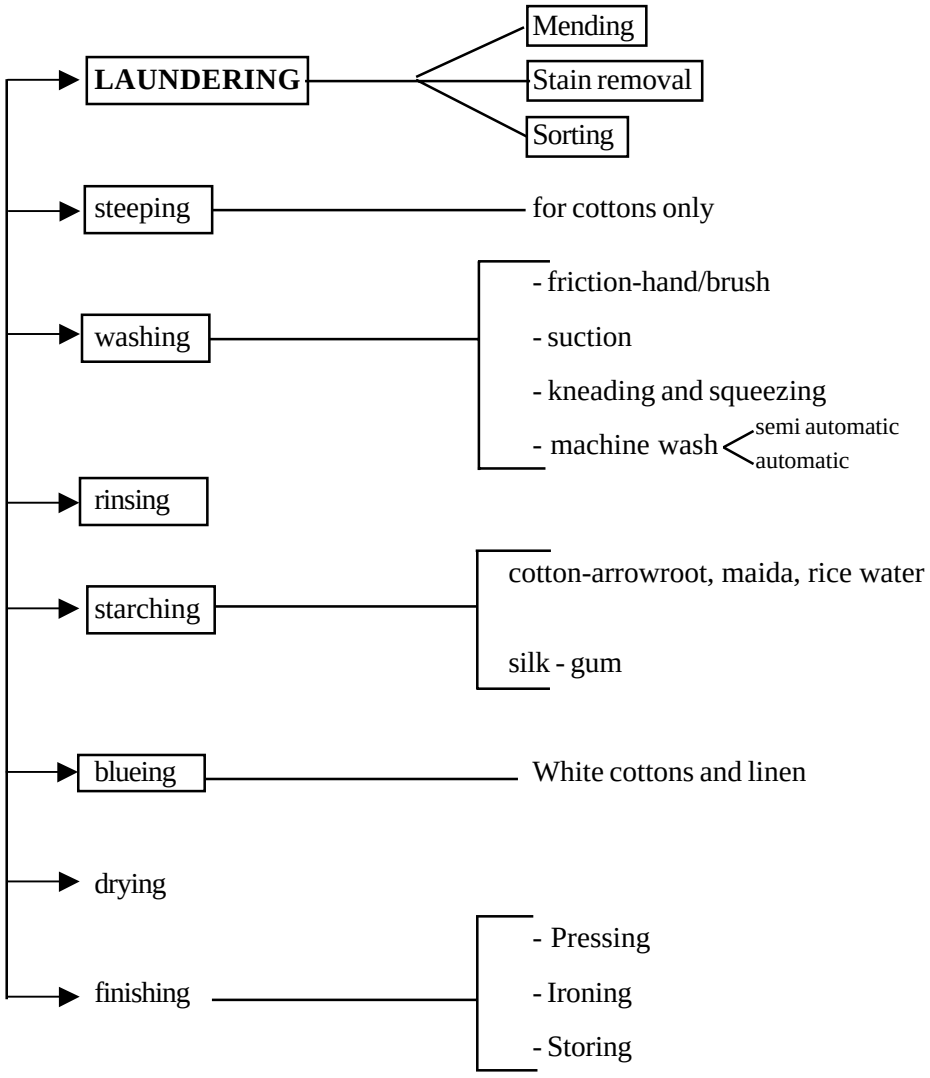
vantage of using these solvents is that they do not penetrate the fabric as water does in ordinary washing. These have no effect on the colour of the fabric, the material does not shrink, lose shape or finish as is frequently the case in wet cleaning.

Woollens, as you remember, do not get dirty quickly hence do not need to be washed as frequently as other fabrics. Hence, what they really require is "spot cleaning". You can do the spot cleaning at home. Dirty spots get fixed to the fabric with grease. If you remove grease the spot is gone. Use grease absorbents or solvents. Some of these are:

Absorbents: French Chalk, Fuller's earth, moong powder, besan, talcum powder, magnesium carbonate, etc. are used for removing spots from all kind of materials.

Grease solvents: White petrol, benzene, carbontetrachloride, methylated spirit

WHAT YOU HAVE LEARNT



TERMINAL EXERCISE

1. What does the word "laundering" mean?
2. Why is it important to launder clothes?
3. List the two main methods of laundering and their suitability to fabrics?
4. What is a stain? How would you identify a stain?
5. What are the general precautions to be taken for removing stains?
6. How will you remove the following stains from a silk fabric?
   i) Coffee
   ii) Nail Polish
   iii) Blue ink
   iv) Grass
   v) Paan (Betel leaf)
7. List the three basic steps to be followed for laundering any kind of fabric.
8. How will you wash a cotton garment? What precautions will you take and why?
9. Point out the differences in washing the following:
   i) Silk and wool
   ii) Wool and cashmilon
   iii) White and coloured cottons.
10. Answer the following questions:
    i) Why should very dirty cotton fabrics be soaked?
    ii) Why is light pressure used for washing silk?
    iii) Why is vinegar added in the final rinse for silks?
    iv) Why should woolens be dried on a flat surface?
    v) Why should you not use a hot iron for ironing nylon?

ANSWERS TO INTEXT QUESTIONS

27.1 1) i, ii, iii - Refer to text

27.2 1. (i) True (ii) False, syndets are obtained chemically. (iii) True (iv) False, syndets do not leave any deposits on the fabric. Thus, they do not appear dull and grey.

27.3 1. (a) False - Bleach should never be allowed to remain in the fabric, it can cause serious damage.

(b) True (c) True

(d) True

2. a. bleach b. cotton c. oxalic acid

d. Hydrogen peroxide e. Reducing bleach.

27.4 1. (i) b (ii) a (iii) c (iv) b (v) d (vi) a (vii) a

27.5 1. (i) mended (ii) coloured (iii) losen (iv) shining (v) undergarments (vi) shade (vii) yellow (viii) buttons (ix) mildew

2. (i) Do not use bleach

(ii) Do not wash.

(iii) Drip dry

(iv) Hand wash (Do not machine wash)

AUDIO

Selection of clothing

VIDEO

Summer dressing

For more information
Log on to http:// www.fabriclink.com/fabriccare.html