Care and Maintenance of Fabrics

17

Learning Objectives

After completing this chapter the learner is able to —

- understand the aspects of care and maintenance of different fabrics.
- know the procedure of removing different stains.
- identify the process of laundry.
- describe the role of water, soaps and detergents in laundering.
- describe use and care of the fabric in relation to their properties.

17.1 Introduction

You learnt in some of the previous chapters about the significance of fabrics around us. They protect and enhance humans and their surroundings. Care and maintenance of fabric products e.g., clothing, furnishing, or any other use within the household, is very important. Final selection and purchase of any product or material is largely based on its appearance in terms of colour and texture, its quality and its functionality. It therefore becomes very important that these characteristics are retained for the expected life of the material. Care and maintenance may thus include:

- keeping the material free of physical damage;
- retaining its appearance:
  - Removal of stains and dirt without damaging its colour
  - Retaining or refurbishing its brightness and textural characteristics such as softness, stiffness or crispness
  - Keeping it free of wrinkles or retaining creases or removing wrinkles and adding creases where required

17.2 Mending

Mending is the general term we use when we try to keep the material free of damage occurring in normal use or due to accident. It includes the following.

- Repairing cuts, tears, holes
- Replacing buttons/fasteners, ribbons, laces or fancy attachments
- Restitching seams and hems if they open up

These are best taken care of as and when they occur. It is absolutely essential that they be attended to before laundering as the strain of washing may lead to greater loss to the fabric.

17.3 Laundry

Every day care of the fabrics generally consists of washing to keep it clean and ironing to get a smooth wrinkle free appearance. Many materials often require special treatments to get rid of accidental stains, overcoming the grayness or yellowness that occurs due to repeated washings and adding stiffness or crispness. Laundering includes — stain removal, preparation of fabrics for washing, removing dirt from clothes by washing, finishing for its appearance (blueing and starching) and finally pressing or ironing for a neat appearance so that they can be stored ready for use.

Stain Removal

A stain is an unwanted mark or colouration on a fabric caused by contact and absorption of foreign matter, which cannot be removed by normal washing process and requires special treatment.

In order to use the right procedure for removing the stain, it is important to identify the stain first. Identification may be done on the basis of colour, smell and feel. The stains can be classified as:

(i) **Vegetable stains:** tea, coffee, fruits, and vegetables. These stains are acidic by nature and can be removed by alkaline medium.

(ii) **Animal stains:** blood, milk, meat, eggs etc. These are protein in nature and removed by detergents in cold water only.

(iii) **Oil stains:** oils, ghee, butter etc. These are removed by the use of grease solvents and absorbents.

(iv) **Mineral stains:** ink, rust, coal tar, medicine etc. These stains should be washed first in acidic medium and then in alkaline medium

(v) **Dye bleeding:** colour from other fabrics. These stains can be removed either by dilute alpalies or acids depending on the fabric type.

Removal of Stains – General Considerations

- Stain is best removed when fresh.
- Identify the stain and use the right procedure for its removal.
- For unknown stains, start with a simple process and move to a complex one.
- Repeated use of milder reagent is better than one time use of a strong agent.
- Wash all fabrics with soapy solution after stain removal to remove all traces of chemicals from it.
- Dry fabrics in the sun as sunlight acts as natural bleach.
- For delicate fabrics try out the chemicals on a small portion of fabric; if they damage the fabric, do not use them.

(i) **Techniques of stain removal**

(a) Scraping: built up surface stains can be scraped lightly using a blunt knife.

(b) Dipping: The stained material is dipped into the reagent and scrubbed.

(c) Sponging: The stained area is placed on a flat surface. The reagent is applied with a sponge on the stained area and absorbed by the blotting paper laid underneath.

(d) Drop Method: The stained cloth is stretched over a bowl. The reagent is put on it with a dropper.

(ii) **Stain removers/reagents for stain removal:** The various reagents used for stain removal should be used in liquid form and in concentrations recommended for their use. These reagents can be grouped as follows:

(a) Grease solvents: Turpentine, kerosene, white petrol, methylated spirit, acetone, carbon tetra chloride

(b) Grease absorbents: Bran, Fuller's earth, talcum powder, starch, French chalk

(c) Emulsifiers: Soaps, detergents

(d) Acidic reagents: Acetic acid (vinegar), oxalic acid, lemon, tomato, sour milk, curds

(e) Alkaline reagents: Ammonia, borax, baking soda

(f) Bleaching agents:

- Oxidising bleaches: Sunlight, sodium hypochlorite (javelle water), sodium perborate, hydrogen peroxide
- Reducing bleaches: Sodium hydrosulphite, sodium bisulphate, sodium thiosulphate

Table 1: Common stains and the method of removing them from cotton fabric	
Stain	**Method of removal**
Adhesive Tape	• Harden with ice, scrape off, apply any solvent
Blood	• Fresh stain – wash with cold water • Old stain – soak in salt solution, rub and wash
Ballpoint pen	• Keep a blotting paper under it and sponge with methylated spirit
Candle wax	• Soak in cold water immediately, scrape off, dip in white vinegar, rinse with cold water
Chewing gum	• Apply ice, scrape off, soak in cold water, sponge with a solvent
Chocolate	• Soak in cold water, in hypochlorite bleach (javelle water)
Curry (Turmeric & oil)	• Wash with soap and water, bleach in sun. • Keep blotting paper under fresh stain and iron it. Then wash with soap and water. • Old stains can be removed by soaking in javelle water
Egg	• Wash with cold water, wash with soap and lukewarm water.
Fruits and Vegetables	• Apply starch paste on fresh stain. Then rub and wash. • Use borax, salt and hot water to remove it.
Grease	• Dip in or sponge with grease solvents — petrol, spirit or kerosene oil. Wash with hot water and soap. • Apply starch paste and dry in shade. After doing it 2-3 times it will be removed. • Soak in javelle water and wash with soap and water.
Ink	• Fresh stain can be removed by soap and water. • Apply lemon juice, curd or sour milk and salt and dry. • Javelle water can remove stain. • Rub in potassium permanganate solution and then dip in oxalic acid.
Ice Cream	• Sponge with a grease solvent, wash in hot soapy water.
Lipstick	• Soak in methylated spirit, wash with soap and water. • Rub glycerine, wash with soap.
Medicines	• Dip in methyl alcohol, or in a dilute solution of oxalic acid. Wash with hot water.
Mildew	• Sponge with hypochlorite bleach
Milk or cream	• Sponge with a solvent. Wash in cold water.
Paint or Polish	• Rub with kerosene and/or turpentine oil. • Bleach with sodium thiosulphate.
Rust	• Soak in oxalic acid and rub. • Treat as for ink stain.
Scorch	• Sponge with hydrogen peroxide. Stain will not be removed if fibre has been damaged.

Note:

(a) These are the methods of removing stains from white cotton fabrics. Suitable precautions should be taken when applying on other fibres or on coloured materials.

(b) Stain removal is the preparatory step in laundry. It must be followed by washing or dry-cleaning and all traces of chemicals used should be removed.

Removal of dirt – the cleaning process

Dirt is the term applied to grease, grime and dust jammed between the fabric structure. There are two types of dirt. One, which is held loosely onto the fabric and can be removed easily and the other, which is held tightly by means of sweat and grease. The loose dirt can be simply brushed or shaken off or will be removed by steeping in water. The tightly held grease can be loosened in steeping process, but requires reagents that will act upon the grease to loosen the dirt. There are three main methods of removing grease – by the use of solvents, absorbents or emulsifiers. When cleaning is done by solvents or absorbents it is called **dry cleaning**. Normal cleaning – washing is done in water with the help of soaps and detergents, which emulsify the grease (break it in to very small particles). This is then rinsed with water.

(i) **Water** is the most valuable agent used for laundry work. There is a certain adhesion between fabrics and water. During steeping water penetrates into the fabric and cause wetting. **Pedesis** or the movement of water particles helps to remove the non-greasy dirt from the fabric. Washing in water alone, with agitation provided by hand or machine, will remove some loose dirt and particulate soils. Increase in temperature of the water increases its pedesis and its penetrating power. It is further beneficial when the dirt is greasy. However, water alone cannot remove the dirt that is not soluble in water. It also does not have the ability to keep the dirt suspended resulting in the removed dirt getting redeposited on fabric. Redeposition of dirt is the major cause of fabric graying over repeated launderings.

(ii) **Soaps and detergents** are the most important cleansing agents used in laundry work. Soap result from a reaction between natural oils or fats and alkali. If alkali is used in excess it is released when soap is used on the fabric. Synthetic detergents are synthesised from chemicals. Both soaps and detergents are sold in powder, flake, bar and liquid forms. The type of soap or detergent to be used depends on the fibre content, colour and the type of dirt on the fabric.

Both soaps and detergents share a critical chemical property – they are surface–active agents or surfactants. In other words, they reduce the surface tension of water. By reducing this effect water soaks more easily in clothes and removes stains and dirt faster. Surfactants and

other ingredients in laundry detergents also work to keep the removed soils suspended in the wash water so they do not redeposit on to the clean fabrics. This prevents graying of fabrics.

There are some differences in soaps and detergents. Soaps possess a number of qualities that make them preferable to detergents. As mentioned earlier, they are natural products and less harmful to the skin and environment. Soaps are biodegradable and do not create pollution in our rivers and streams. On the other hand, soap is not effective in hard water, which results in wastage. Another shortcoming of soap is that it is less powerful than synthetic detergent and tends to lose its cleaning power over time. An added benefit of detergent is that they can be specifically engineered for each cleaning task and for use in different types of washing machines.

(iii) **Methods of washing:** Once the soap or detergent has emulsified the grease holding the dirt, it has to be held in suspension till it is rinsed out. Some parts of the fabric may have dirt, which is closely adhering to the fabric. The methods employed for washing assist in these two tasks – disassociating the dirt adhering to the fabric and holding it in suspension. The method selected depends on the fibre content, the type of yarn and fabric construction and the size and weight of the article being washed.

The methods of washing are classified as follows:

- Friction washing
- Kneading and squeezing
- Suction
- Washing by machines

Let us now discuss these methods in detail.

(a) **Friction:** This is the most commonly used method. This method of cleaning is suitable for strong fabrics like cottons. Friction may be caused by rubbing one part of the garment against another part of the garment with hands. Alternately using a brush over the dirty parts kept on the palm of the hand or on a scrubbing board if the article is big are also examples of friction washing. Friction is not applied on delicate fabrics like silk and wool and on surfaces like pile, looped or embroidery.

(b) **Kneading and squeezing:** As the name suggests, this method involves gently rubbing with hands of the article in soap solution. Since the pressure applied in this is very low, it does not harm the texture, colour or weave of the fabric. Thus the method can be easily used to clean delicate fabrics like wool, silk, rayon and coloured fabrics. This method would not be effective for heavily soiled articles.

(c) **Suction washing:** This method is used for articles like towels where brush cannot be used and when it is too big or heavy to be handled

by kneading and squeezing technique. The article is placed in soap solution in a tub and the suction washer is pressed down and lifted repeatedly. The vacuum created by pressing loosens dirt particles.

(d) **Machine washing:** Washing machine is a labour saving device especially useful for large institutions, like hotels and hospitals. These days a variety of washing machines are available in the market by different companies. The principle behind each is the same. This is to create agitation in the clothes to loosen the dirt. For washing in these machines, pressure is provided by the movement of either the tub in the machine or a central rod attached to the machine. The washing time varies with type of fabric and amount of soiling. Washing machines can be manual, semi-automatic and fully automatic.

Finishing

After washing it is very important to rinse the article in clean water till it is absolutely free of soap or detergent. Very often in the last rinse some other reagents are added which can help to restore the freshness or brightness of the fabric. Other reagents may add to the body of the fabric and improve its stiffness or crispness.

(i) **Blues and Optical Brighteners:** You must have observed that with repeated use and washings white cotton articles tend to loose their whiteness and become yellow in colour. In case of synthetic or manufactured fabrics and their blends the discolouration is more towards gray.

The use of blues is recommended to counteract yellowness and to restore the whiteness. They cannot remedy the grayness. Blue is available in the market as ultramarine blue (in the form of a fine powdered pigment) and as liquid chemical dye. Right amount of blueing should be used in the last rinse. The powder blue is pasted with a little amount of water and then added to more water. This solution is used immediately, as on standing this powder tends to settle at the bottom and would give patchy results. Liquid blues are easier to use and give more even results. Care should be taken to see that blue is applied to the fabric in a thoroughly wet (but not dripping) condition, which is free of folds of wringing. Move the article in the blue solution for a short duration, remove the excess moisture and place it for drying.

Optical Brightening Agents or Fluorescent brightening agents are compounds with low grade or weak dyes that possess the property of fluorescence. These compounds can absorb light at a shorter wavelength and re-emit them at a longer wavelength. Treating a fabric with an optical fluorescent brightener can give it an intense bright whiteness, which can counteract both yellowness and grayness. They can also be used on coloured printed fabrics. Optical brighteners are sometimes

referred to as whiteners. However, they cannot destroy a colour and therefore should not be confused with bleaching.

(ii) **Starches and stiffening agents:** Repeated launderings cause loss to body of the fabric, which also looses its gloss and shine. Starching or use of stiffening agents is the most common technique to make the fabric firm, smooth and shiny. This finish not only enhances appearance and texture, but also prevents direct contact of dirt with the fabric. Starching also makes the subsequent washing easier as dirt clings to starch rather than to the fabric.

Stiffening agents are derived from nature, either plants or animals. The most common stiffening agents are starch, gum acacia, borax and gelatin.

(a) **Starch** is obtained from wheat (maida), rice, arrow-root, tapioca etc. They are available powder form in the market and have to be cooked before use. Consistency of starch depends on the thickness of the fabric to be starched. As a stiffening agent it is used only for cotton and linen. Thick cottons need light starching while thin fabrics need heavy starching. Commercially prepared starches available in the market are easy to use and do not necessarily require hot water for preparation.

(b) **Gum Acacia or Gum Arabic** is the natural gum obtained from the Acacia plant (babool tree) which is available in granulated lumps. The stiffening solution is prepared by soaking it overnight to dissolve it and then sieving it to get a lump free solution. This gives only light stiffening, which is more in the nature of crispness. It is used for silks, very fine cottons, rayons and silk and cotton blends.

(c) **Gelatin** is easy to make and use but is expensive compared to other homemade starches.

(d) **Borax** is not really a starch but the addition of a small quantity in the starch solution helps to improve its stiffening action. When the fabric is ironed after starching, borax melts and forms a thin film on the surface of the fabric. This is water repellent in nature and thus maintains the crispness even in humid climates.

Application of stiffening agent depends on the fibre content and the specific use of the article. For personal clothing it is often the user's choice as well. Care has to be taken when applying the starch solution that the correct consistency of the starch is taken and the fabric is in a thoroughly wet (but not dripping) condition. The fabric is kneaded well in the solution, excess squeesed out and dried. When starching dark coloured cottons a small amount of blue or tea concoction can be added to the starch solution so that it does not show up as white patches.

(e) **Drying:** After the clothes have been washed, blued and starched, they have to be dried, before they can be ironed or stored. The best way of

drying is to hang the fabrics outside in the sun with the wrong side facing out. Sun not only dries the clothes faster but also acts as an antiseptic, and also as a bleaching agent for white fabrics. Delicate fabrics like silk and woolens cannot be hung for too long in the sun, as strong sunlight damages these fabrics. Synthetic fibres lose their strength when exposed to sunlight. These fabrics also tend to turn yellow, which is irreversible. So, it is best to dry these fabrics indoors.

Ironing

After you have washed your articles, you would notice that these articles have wrinkles and undesired creases on them. Ironing helps to get rid of these and creates creases where desired. Good ironing requires three things high temperature, moisture, and pressure.

An iron can provide high temperature. It can be a charcoal iron or an electric iron. The charcoal iron though cheap has certain disadvantages. The coal that is used to produce heat may stain the article being ironed and most important is that the temperature cannot be controlled in this type of iron. Different fibre groups have different thermal properties. Due to this they need to be ironed at their specific temperatures This can be achieved by using an electric iron, where the temperature can be controlled. Thus, if electricity is not a problem, then an automatic electric iron is the best option.

The second requirement for ironing is moisture. Moisture would be automatically provided if you start ironing your clothes when they are damp after washing. If your articles are completely dry, then you can sprinkle some water on them and roll them in towel, so that moisture penetrates evenly throughout the article. Water can also be sprayed with a normal spraying bottle.

The third requirement for good ironing is pressure. This is provided manually by the movement of the iron over the article to be ironed. Iron is generally moved on the clothes along the length. The articles, which may stretch or loose their shape by the movement of iron, for example, laces should be pressed and not ironed. Pressing involves keeping the hot iron at one place on the cloth, then lifting it and then keeping it at another place on the cloth. Pressing can also be used for setting of any folds like creases, hems, pockets, plackets and pleats.

The table that one uses for ironing should be rightly padded, and yet firm. The top should have an even surface and should be of such size and height that it is comfortable for the worker. These days padded ironing boards are available in market. If these are not available, then on any leveled surface 3-4 layers of some thick fabric can be spread and used as a surface for ironing.

After ironing the articles are either given specific folds or are placed on hangers depending upon the storage space available. It is important that they are available in the finished state when required for use.

Dry-cleaning

Dry-cleaning can be defined as the cleaning of fabrics in a non-aqueous liquid medium. The important difference between dry and wet solvents is that while water is absorbed by the fibres, which causes shrinkage, wrinkle formation and colour bleeding; the dry solvents do not cause fibre swelling. Hence dry-cleaning is a safe method for cleaning delicate textiles. For dry-cleaning, the most common solvents used are perchloro-ethylene, a petroleum solvent, or a fluorocarbon solvent.

Dry-cleaning is generally done in industrial establishments and not at the domestic level. The items are brought to the cleaner's and identified with a tag that includes special instructions. Items are first inspected and treated at a spot board. Because a solvent is used, stains that are water-soluble and other hard-to-remove spots must be treated on the spot board. Customers who identify the stains for the dry cleaner make the cleaning task easier and ultimately improve their satisfaction with the cleaned product.

Additional treatment that many dry cleaners are equipped to do include replacing buttons, doing minor repairs to items, replacing sizing, water repellency and other finishes like permanent creases, moth proofing and cleaning fur and leather. Some dry cleaners also clean and sanitise feather pillows, blankets, quilts and carpets, and clean and press draperies.

17.4 Storage of Textile Products

The weather is not the same all the year round in our country; hence we have clothing to match all temperatures. The need for specific fabrics for specific weather conditions necessitates the storage of those not needed at the particular time. Whatever be the clothes, they need to be clean and dry before they are packed and stored away. Woolens should be brushed well and dry cleaned before they are stored, all stains should be removed and all tears mended. Pockets are to be turned inside out, trousers and sleeves turned up; they must be examined and freed from dust, grit, soot etc. All clothing should be shaken, brushed, washed, ironed and folded. Pack loosely in cupboards or trunks. Too compact and tight packing may result in permanent creases sets at the folds of the fabrics. The shelves, boxes or closets chosen for storing should be clean, dry and insect free, away from dust and dirt. It is important that the packing should be in an atmosphere of very low humidity. Different fabrics require different care while storage, as each is susceptible to different micro organisms.

17.5 FACTORS AFFECTING FABRIC CARE

The selection, use, and care of fabrics depend on many factors. Fibre content, yarn structure, fabric construction, colour application and finishing are the important factors considered for the product.

Each type of fabric has its own individual characteristics and hence needs specific care.

Fibres of which fabrics are made influence their care requirements, as shown in Table 2.

Table 2: Fibre properties that affect care and maintenance of fabrics

Fibre	Properties	Care requirements
Cotton & Linen	Strong fibres, stronger when wet, can withstand hard friction	
	Resistant to alkalis, can be easily washed with strong detergents	
	Can withstand high temperatures, if necessary can be boiled	
	Resistant to organic solvents and bleaches, acidic substances weaken the fibre	Acidic reagents used should be rinsed and neutralised
	Gets crushed easily, have to be ironed properly to remove the wrinkles	Needs to be damp for ironing or may scorch
	Fungus and mildew may attack them	Should be completely dry and stored in low humidity atmosphere
	If heavily starched, it can be attacked by silverfish	Need to be de-starched if stored over long periods
Wool	Weak fibre, and when it is wet weakens further	Should be handled gently during laundering
	Easily damaged by alkaline substances	Strong detergents or soaps should be avoided.
	Dry-cleaning solvents and stain removing agents have no deleterious effect.	Bleaches have to be used with care
	When wool is subjected to mechanical action like agitation during washing, they have a tendency to felt and shrink.	Washing in cold water with minimum handling is advised
	Knitted articles in wool can stretch out of shape while washing	An outline of the garment is made before washing and after washing the article is stretched back to the outline.

	Has good resilience and does not wrinkle, may not require ironing	No direct ironing of the fabric, if needed it may be steam pressed
	Wool protein is particularly susceptible to damage by insects like clothes moths and carpet beetles	Repeated spraying with chemicals can prevent the damage during storage; naphthalene balls are effective for prevention of insect infestation
Silk	Strong fiber but it is weaker when it is wet; careful handling is required in washing of silk	Only gentle friction should be used while washing
	Damaged by strong alkalis, organic acids are used in the finishing	Mild detergents should be used for washing
	Dry cleaning solvents and spot removing agents do not damage silk	Bleaches have to be used with care
	Does not stretch or shrink on washing, has medium resilience due to which it wrinkles during use	Needs to be ironed
	Scorches easily if ironed at high temperature using dry heat	It should be thoroughly damp and ironed at low temperature
	Perspiration also damages the fabric	Need to be dry-cleaned and aired properly before storage.
	Silk gets weakened if exposed for long time to sunlight	Should not be dried in sun
	Resists attack by mildew and bacteria but are eaten by carpet beetles	Should not be stored if soiled
Rayon	Strength of most of the rayons is relatively low and further decreased when the fibers are wet	Require careful handling in laundering
	Chemically identical to cotton, but may be damaged by strong alkalis	It is safer to use mild soaps and detergents
	It is resistant to dry-cleaning solvents and stain removing agents	
	Rayon shrinks on washing	Care has to be taken while laundering
	Fabrics made of rayon tend to wrinkle and stretch easily as their elastic recovery and resilience are low.	However, it is easy to iron
	Mildew and silverfish are harmful to rayon, they are subject to harm by the rot producing bacteria	Should be stored in absolutely clean and dry condition and atmosphere.

Nylon	Very good strength, retains much of its strength when wet	It requires no special care
	Is not affected by alkalis but acids may destroy the fiber	Should be rinsed well if acidic reagents are used
	Dry cleaning solvents, stain removing agents, detergents and bleaches can be used safely.	
	Can absorb dirt from other soiled articles	Should be washed separately
	Does not absorb water and therefore dries up quickly	
	Sunlight is destructive to nylon and causes a marked loss of strength after extended exposure.	Not recommended for window curtains or draperies
	Nylon is highly resistant to attack by most insects and microorganisms	
Polyester	No loss of strength when polyester is wet; can be easily washed	
	Good elastic recovery and resilience	Does not require hot ironing
	Develops small balls in its surface, which cannot be removed.	
	Moisture regain of polyester is very low, i.e., it does not absorb water easily.	Accounts for discomfort during hot climates
	If oil drips or drops on this fabric, it refuses to part with it.	Oily stains need to be handled carefully
	It is resistant to microorganisms and insects	
Acrylic	Strength is similar to cotton	Can be washed easily without any special care
	Has high elongation with good elastic recovery, so it does not get wrinkled easily	
	Moisture regain of acrylic is low and the fabrics dry quickly	
	It has good resistance to most alkalis and acids and most of the dry-cleaning solvents do not damage the fiber.	
	The fibers have excellent resistance to sunlight, all types of soaps, synthetic detergents and bleaches. It is not affected by moths	
	It catches fire readily and unlike other synthetic fibres continues to melt and burn	Care to be taken; can prove hazardous for children

Yarn structure

Yarn structure (twist or type of yarn) may affect maintenance. For example yarns with high twist would shrink or novelty and complex yarns may catch or snag or get abraded. Blended yarns would mean that both fibre contents would have to be taken care of. You cannot use very hot water when polyester is blended with cotton since it would shrink, however it would not wrinkle much and therefore easier to iron.

Fabric construction

Fabric construction is closely related to maintenance. Simple closely woven fabrics are easy to maintain. Fancy weaves — satin, pile, or those with long floats may snag during washing. Knitted fabrics stretch out of shape and may thus require re-blocking. Sheer fabrics, laces and nets as also felts and non-wovens have to be handled carefully.

Colour and finishes

Colour is an important aspect of care. Dyed and printed fabrics may lose colour during cleaning and may stain other materials. The colour of the fabric may be tested before use and proper care needs to be taken in its use.

Many of the finishing treatments alter the behaviour of the fabrics, which may improve or cause problems. Some of the finishes may require renewal after every wash.

Thus, we can conclude that fibre content, yarn structure, fabric construction, colour application and finishing are the important factors considered for all fabric products. They combine to determine the appearance, comfort, durability and maintenance requirements. The importance of appearance, comfort, durability and maintenance are relative. It becomes our responsibility to evaluate the qualities of a fabric in terms of its ultimate end-use and then make the decisions concerning its use and care.

17.6 Care Label

The care label is a permanent label or tag containing regular care information and instructions that are attached or affixed in such a manner that it will not separate from the product and will remain legible during the useful life of the garment.

Washing Instructions on care-labels	
Washing Instructions	**Meaning**
89^0 For 29^0 C 	Use cold water or set temperature of machines at cold
90^0-110^0 For 32^0-43^0 C 	Use warm water or set temperature of machine at warm
150^0 For 60^0 C 	Use hot water or set temperature of machine at hot
WASH CYCLE	
Delicate cycle	Time of agitation is reduced and speed of agitation is slow
Wash separately	Wash like colours together
Wash inside out	Reverse the garment before washing
Warm rinse	Use warm water for rinsing
Cold rinse	Use cold water for rinsing
Do not spin	Do not put in a spinner
Do not wring	Do not twist the garment
Hand wash	Wash by hand, kneading and squeezing method
Machine wash 	Can put in machine for washing
DRYING	
Tumble dry 	Can dry in a front loading machine (the clothes spin clockwise)
Drip dry	Dry for short while without wringing the water (used for synthetics)
Line dry	Hang on a drying line
Dry flat	Dry on a flat surface (used for woolens)
Dry in shade 	Do not dry in sun (for coloured clothes)
PRESSING AND IRONING	
	Set temperature of iron at 210^0 C (hot)
	Set temperature of iron at 160^0 C (moderate)
	Set temperature of iron at 120^0 C (low)
	Do not iron
BLEACH 	Clorine bleach
	Do not bleach
DRY CLEANING	
	Use all solvents
	To be dry cleaned with only white spirit or choroethylene
	Special care has to be taken while dry-cleaning as they are sensitive to dry-clean
	Use white spirit only
	Do not dry-clean

In one of the last chapters that follow this, we once again refer to the significance of communication – just as you read about this on the care labels. The next chapter tells us of the various reasons why communications are received differently by different people.

Key Terms

Mending, Laundry, Stain Removal, Water, Soaps and Detergents, Dry-cleaning, Friction, Suction, Kneading and squeesing, Blues and Starches, Care label

Review Questions

1. What are the different aspects of care and maintenance of fabrics?
2. Define the term 'stain'. What are the different types of stains and what techniques can be used for removing them?
3. Write the steps in removing unknown stains from fabrics.
4. What is dirt? How do water, soaps and detergents combine to remove dirt from fabrics?
5. How does finishing after washing improve the brightness and textural characteristics of fabrics?
6. What is dry-cleaning? What are the types of fabrics where dry-cleaning is recommended?

Practical 17

Care and Maintenance of Fabrics

Theme: Colour fastness of fabrics
Task: Analysis of colour fastness to washing

Conduct of the practical: This type of knowledge will help the consumer make a wise choice for the care to be taken while washing coloured fabrics.

Conduct of the practical

- Take four samples each of coloured fabric and white cotton fabric measuring 2" x 4".
- Join coloured samples with white samples to produce (4" X 4") four samples (ABCD)
- Keep (A) as control sample and treat the samples B C D with already prepared 0.5% soap solution in warm water (40o C), rub gently.
- After five minutes rinse and dry.

- Repeat the process for samples C and D. Wash, rinse and dry.
- Repeat the process with sample D and record the observation.

Observations

Sample	Change in colour of test samples	Staining of white cloth attached
A	Control Sample	-
B		
C		
D		

Make a group of 4-5 students and compare the observations of other fabrics also.

Practical 18

Care and Maintenance of Fabrics

Theme: Study of labels on fabrics and apparel
Task: Analyse the information given on the fabric and apparel labels

Purpose of the practical: The appearance, care, and servicability of garments and other products made of fabrics is a concern for consumers. This information is provided to consumers through labels or hand-tags. The fabric or yardage material has information stamped on one end or on selvage at regular intervals. These labels aid the consumer in identifying their products' properties and in caring for them in an appropriate manner so as to retain their claimed characteristics for a reasonable period of time.

Conduct of the practical: Collect five samples each of labels of readymade garment and 'stampings' on yardage.

- Analyse garment labels with respect to clarity, fibre content, size and care instructions regarding washing, ironing, storage etc.
- Analyse stampings with respect to fibre content, yarn and fabric description, and finishes applied.