

DEMONSTRATION

To illustrate how to test colorfastness of colored fabrics.

SUPPLIES:

Breakers or glass measuring cups
Measuring spoons
All-purpose detergent
Thermometers
Warm water, hot water
Range of colored fabrics of varying intensity (2 identical swatches of each fabric)

- include prints, plaid, etc.
- size approximately 3" x 5"

Clear glass jars or drinking glasses

INSTRUCTIONS:

Divide class into groups. Give each group several colored fabrics to test. Assign several groups to test the fabrics in **warm** water and several groups to test identical fabrics in **hot** water. Have students proceed as follows:

1. Fill beakers or glass measuring cups about 2/3 full with **warm** water or **hot** water.
2. Add 1/4 teaspoon of an all-purpose detergent. Stir to mix.
3. Soak colored fabric.
4. Squeeze fabric gently or stir it and watch to see if water discolors.
5. Pour water into a glass container such as a jar or drinking glass and set fabric beside this container to these can be shown to the rest of the class later. Label glass container **WARM** or **HOT**, depending upon the water temperature used.
6. Repeat this demonstration with other colored fabrics.

When all groups have completed their testing, have them report their results, showing both the fabric and the water in which it was tested. Compare the color of the water in the containers from a given fabric. Are some fabrics colorfast in warm water but not in hot water? Are some fabrics colorfast in both temperatures? Are some not colorfast in either temperature?

When a fabric is not colorfast, it should always be washed alone or only with other items of like color. Fabrics not colorfast in hot water should be washed in warm. Extremely sensitive colors should be washed in cold water or may require dry cleaning.

- Have students do comparison shopping surveys to identify the special features available on laundry equipment such as water level adjustment devices, rinse dispensers, etc. How much do these features add to the cost of the machine? When are they worth the investment?

DEMONSTRATION

To show effect of excessive agitation (shrinkage) either by machine or by hand on woolen fabrics.

SUPPLIES:

Automatic Washer
1/3 yard untreated woolen fabric, 44" to 54" wide
Ruler or tape measure
Scissors
Laundry marking pen or needle and thread
All-purpose detergent
Measuring cup
Tablespoon
6 - 8 towels (to use as a filler load)
Dishpan

TIME REQUIRED:

If all parts of experiment are done, this may require parts of 2 or 3 class sessions. The point can be made with just parts A and B only, or C and D only.

INSTRUCTIONS:

1. Cut the 1/3 yard of woolen fabric into 4 equal pieces.
2. In the center of each piece, rule off an accurate 10" square with the marking pen. Or mark with a heavy pencil and sew carefully around the square using a basting stitch. Number the swatches 1-4.

3. WASHING METHODS:

A. TEST SWATCH #1

1. Pour the recommended amount of detergent into an automatic washer.
2. Let machine fill with warm water.
3. Add test swatch #1 and filler load of towels.
4. Start the washer and allow 10 minutes wash time with regular speed agitation. Let machine proceed through the cycle, but time the number of minutes of agitation in the rinse. The total amount of agitation is significant because any agitation, regardless of whether it occurs in the wash or rinse, contributes to shrinkage. Spin periods do not affect shrinkage.
5. Remove test swatch from the washer and line dry.

B. TEST SWATCH #2

1. Follow first 3 steps used for test swatch #1. Preferably use same automatic washer.
2. Start automatic washer and allow just 1 minute of agitation. (Use slow agitation if this selection is available.) Advance control dial to the wash spin. Let the machine proceed through the spin and fill for the deep rinse. Allow 1 minute of rinse agitation. Advance control dial to the final spin and let machine complete the cycle.
3. Remove test swatch from washer and line dry.

C. TEST SWATCH #3

1. Fill sink or dishpan with 1 gallon of warm water. Add 2 Tablespoons of detergent and swish to dissolve.
2. Add test swatch #3 and rub and squeeze vigorously for 5 minutes (let students alternate if they get tired).
3. Fill sink with fresh water and rinse vigorously for 2 minutes.
4. Repeat Step 3.
5. Roll swatch in terry towel to absorb moisture and line dry.

D. TEST SWATCH #4

1. Follow procedures for swatch #3 but allow only 1 minute of gentle squeezing in the wash and in both rinses.

E. After all swatches are dry, lay them out smoothly on a table and compare the appearance and feel. Then using a ruler, take 3 random measurements in both directions on the 10" square. Average the three readings to determine the amount of shrinkage. (If a 1/10" scale rule is available - each mark is 1% shrinkage.) Up to 3% shrinkage would be acceptable for a woolen garment. More than this would represent a change of one size. Five percent shrinkage would be acceptable for a blanket.

NOTE: Water temperature exerts only a secondary effect on shrinkage of woolens. **AGITATION** is the primary factor. However, if agitation is excessive, more shrinkage may be produced in hot than in warm water.