

Practical No. - 11

To find out the thread count of different types of fabrics

Aim

To find out thread count of woven fabrics

Introduction

You have read about thread count in Book 4 of Home Science in the lesson of fabric construction. In this experiment you will find out the thread count of any two plain woven fabrics.

Thread Count

As the name suggests, counting the number of threads in a fabric is known as thread count. If we define thread count it refers the total number of warps and wefts per square inch of a plain woven fabric. Woven fabric is very important because it does not exist in any other kind of fabrics like knitted non-woven nets, laces etc.

Number of threads in warp and weft direction should be equal or more or less equal, because this to a very large extent tells us about fabric quality, durability and wearlife. Fabric with higher thread count is better in quality than fabric with low thread count.

Also the difference between the number of warps and wefts should not be too much which would mean that fabric is not balance and poor in quality.

Thus, it is because of thread count only that some woven fabrics look more dense (eg. casement fabric) where as other look more open (eg. bandage fabric). But it should always be remembered that it is not only thread count which decides the durability of fabric, it is also the strengths of the yarn, weave structure and many other such related factors. But definately thread count is one of the major factors effecting the fabric quality, durability and wear life of the fabric.

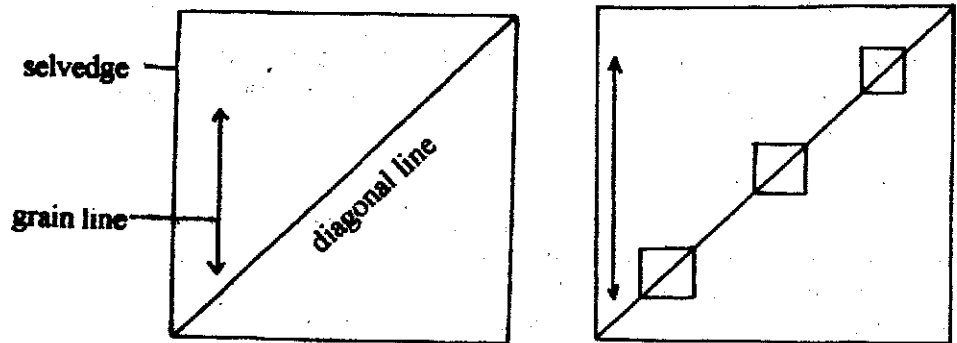
Material Required

1. Fabric
 - a) Casement fabric (10x10 cms.) and
 - b) any other loosely woven cotton fabric, (10x10 cms.)
2. Sewing needle
3. Pencil
4. Scale

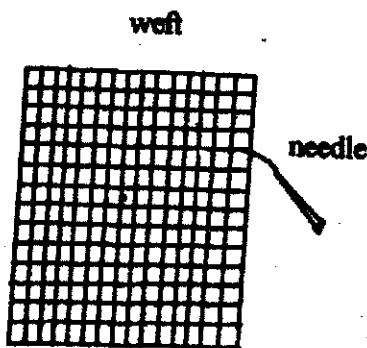
Procedure

1. Mark a grain line on an absolutely straight fabric (10x10 cms)

(Note : Grain line is line parallel to selvedge and yarns parallel to selvedge are warp yarns.) Also in the same mark a diagonal line.



1sq. inch squares on diagonal



2. Mark three squares of 1 square inch each on the diagonal. All the boxes should be equidistant to each other. First box should be 2 cms. away from the edge.

Note : Diagonal line is marked and then squares are marked so that three samples of one square inch is cut through out the entire piece of 10x10 cms. and thus covering more number of warps and wefts in a sample so that the result is more reliable.)

3. Cut the squares and mark them as 1, 2, 3, (of both fabrics)
4. From each sample with sewing needle ravel out first the warp and then weft yarn. Keep them separately and then count the total number of warp and wefts. Note down the reading in the observation table given on the next page.

Find the average warp and weft and then find out thread count which is total of warp + weft in per square inch of woven fabric.

$$T. C. = wp + wf$$

6. Find thread count of both the fabric, do comparison and write the conclusion. Keep in mind fabric with high thread count will be more durable, therefore good quality good, wear life than the other one.

Observation Table

Example

S. No.	Warp	Weft
1.	32	30
2.	31	31
3.	33	32
	av 32	av 31

$$\begin{aligned} \text{Thread count} &= wp + wf \\ &= 32 + 31 \\ &= 63 \end{aligned}$$

Thread count of fabric is 63 (There are no units for thread count.

By rounding it off eg. 36.6 = 37 and 35.2 = 35)

Observation for samples

FABRIC 1

S. No.	Warps	Wefts
1.		
2.		
3.		
	Av	Av

$$\text{Threadcount} = wp + wf$$

FABRIC 2

S. No.	Warps	Wefts
1.		
2.		
3.		

Av

Av

$$T.C = wp + wf$$

PRECAUTIONS

1. The fabric taken should be straight and not skewed
2. Squares should be of exact one square inch
3. Mark first square 2 cms. always from the edge
4. Squares should be equidistant to each other.