

APPENDIX

Details of data (Tables and Figures) on the effect of
5% acrylamide polymer finish on related properties of
wool fabric (W)
2

Table 30 Percent elastic recovery of wool fabric (W)
2
treated with 5% acrylamide polymer finish

Treatments	% Elastic Recovery			
	5 Min	30 Min	12 Hrs.	24 Hrs.
T	77.5	82.2	92.5	92.5
Ø				
T	70.5	74.2	88.5	88.5
2				
T T	72.7	78.7	90.9	90.9
c 2				

Table 31 Tensile strength of wool fabric (W)
2
treated with 5% acrylamide polymer finish

Treatments	Tensile Strength			
	Warp		Weft	
	(lbs.)	(%)	(lbs.)	(%)
T	40.1	100.0	27.9	100.0
Ø				
T	42.0	104.7	28.6	102.5
2				
T T	42.8	106.7	28.6	102.5
c 2				

T = Untreated

Ø

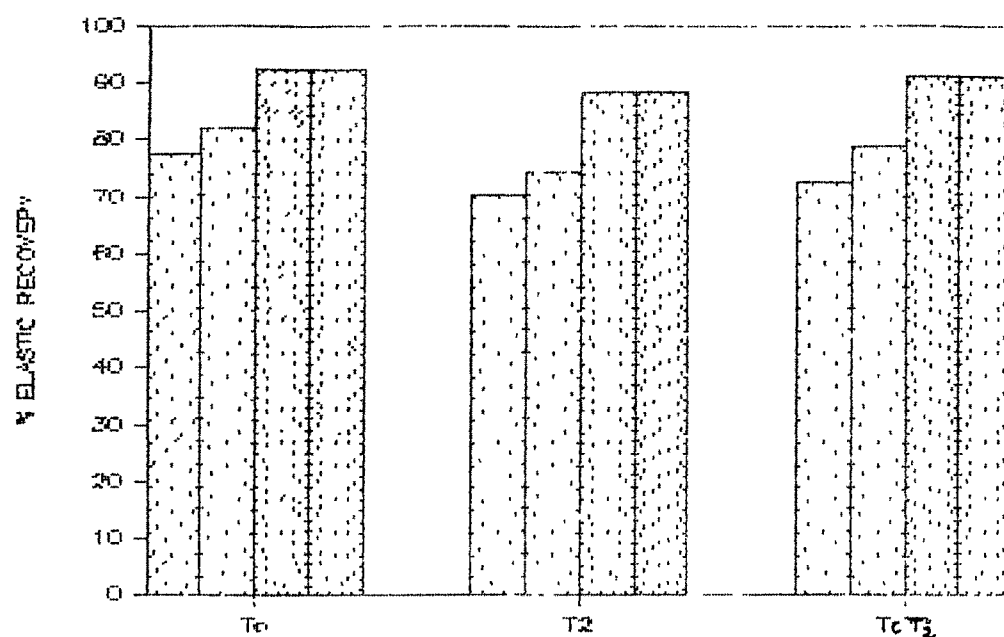
T = 5% acrylamide polymer finish

2

T T = 5% acrylamide polymer finish (on chlorine pretreated)

c 2

Figure 34 Effect of 5% acrylamide polymer finish on elastic recovery of wool fabric (W)
2



T = untreated

T₀ = 5% acrylamide polymer finish

T₀T₂ = 5% acrylamide polymer finish (on chlorine pretreated)

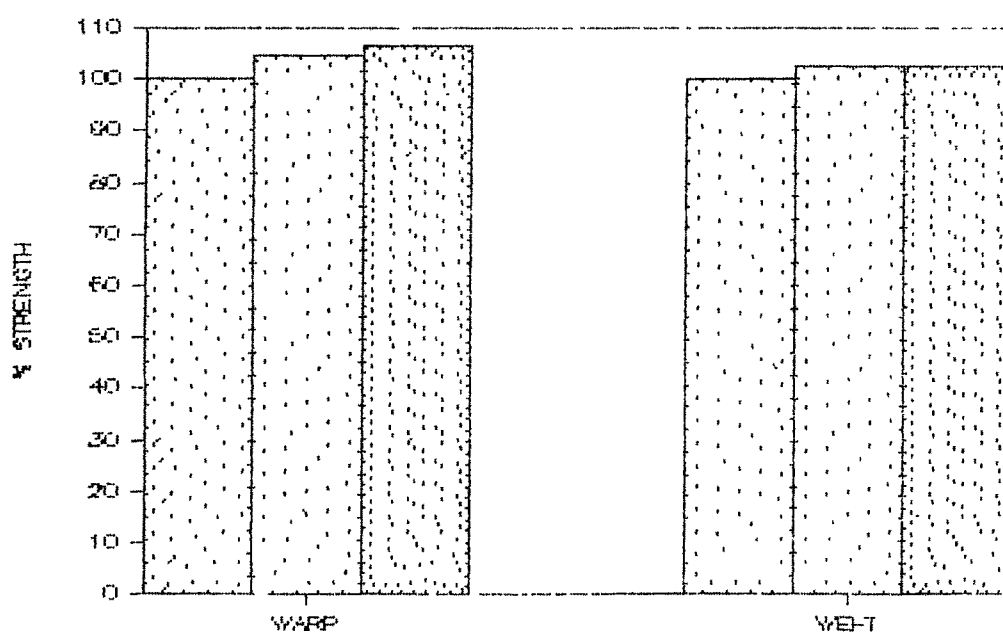
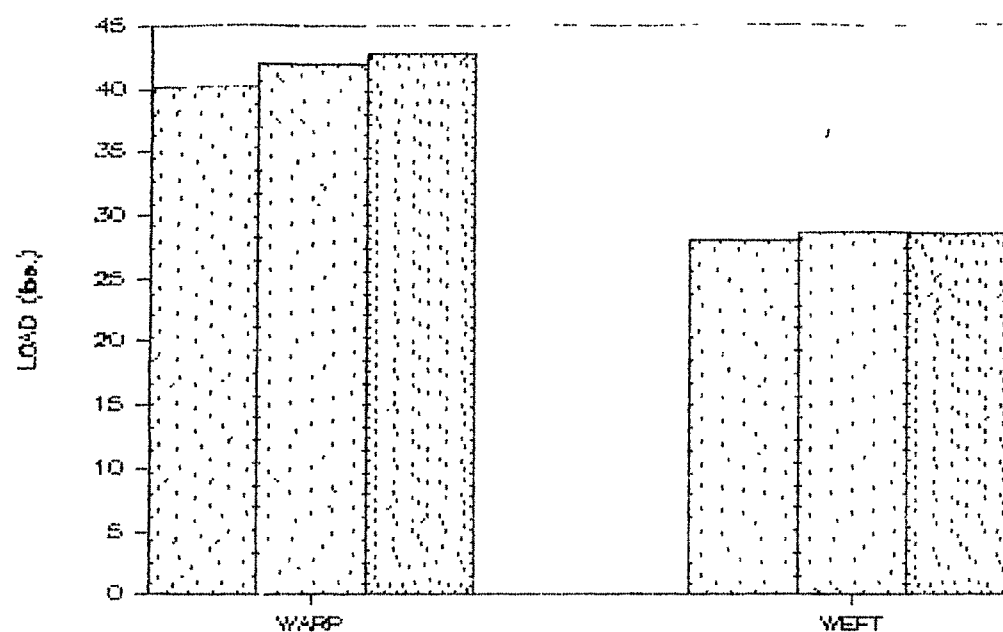
After 5 min.

After 30 min.

After 12 hrs.

After 24 hrs.

Figure 35 Effect of 5% acrylamide polymer finish on tensile strength of wool fabric (W)
2



Untreated

5% acrylamide polymer finish

5% acrylamide polymer finish (on chlorine pretreated)

Table 32a Percent elongation of wool fabric (W₂) treated with
5% acrylamide polymer finish (warp)

Treatments	% Elongation (Warp)							At Breaking Load (Lbs)
	Load (Lbs.)							
	5	10	15	20	25	30	35	
T ₀	20.7	24.0	26.9	30.3	33.7	39.0	46.7	63.3 (40.1)
T ₂	14.6	17.7	20.0	22.8	26.6	30.5	38.5	58.7 (42.0)
T _{0 2}	14.3	17.6	20.5	23.8	29.2	31.5	38.1	58.3 (42.8)

Table 32b Percent elongation of wool fabric (W₂) treated with
5% acrylamide polymer finish (weft)

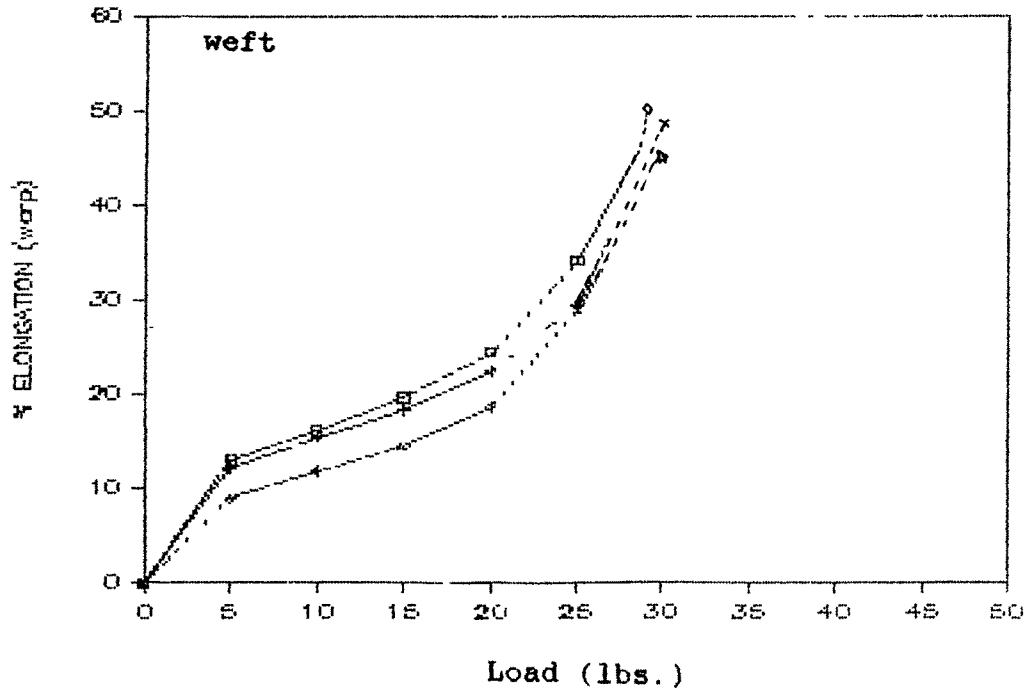
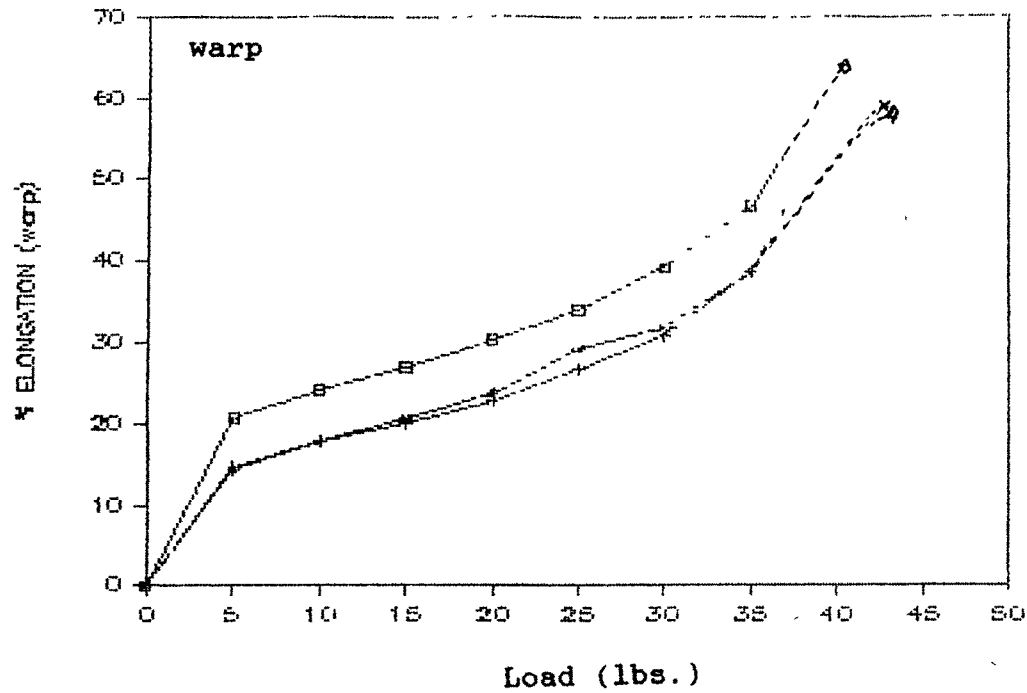
Treatments	% Elongation (Weft)					At Breaking Load (Lbs)
	Load (Lbs.)					
	5	10	15	20	25	
T ₀	13.1	16.2	19.9	24.5	34.2	50.4 (27.9)
T ₂	12.3	15.6	18.5	22.5	29.5	48.3 (28.6)
T _{0 2}	8.9	12.0	14.8	18.7	29.1	43.7 (28.6)

T₀ = Untreated

T₂ = 5% acrylamide polymer finish

T_{0 2} = 5% acrylamide polymer finish (on chlorine pretreated)
c 2

Figure 36 Effect of 5% acrylamide polymer finish on percent elongation of wool fabric (W)
2



□ Untreated

+ 5% acrylamide polymer finish

◇ 5% acrylamide polymer finish (on chlorine pretreated)

Table 33 Tearing strength of wool fabric (W₂) treated with
5% acrylamide polymer finish

Treatments	Tearing Strength (Warp)	
	(gms.)	(%)
T Ø	1476.8	100.0
T 2	1529.6	103.6
T T c 2	1507.2	102.1

Table 34 Bending length of wool fabric (W₂) treated with
5% acrylamide polymer finish

Treatments	Bending Length	
	(cm.)	
T Ø	3.7	
T 2	4.1	
T T c 2	4.0	

T = Untreated

Ø

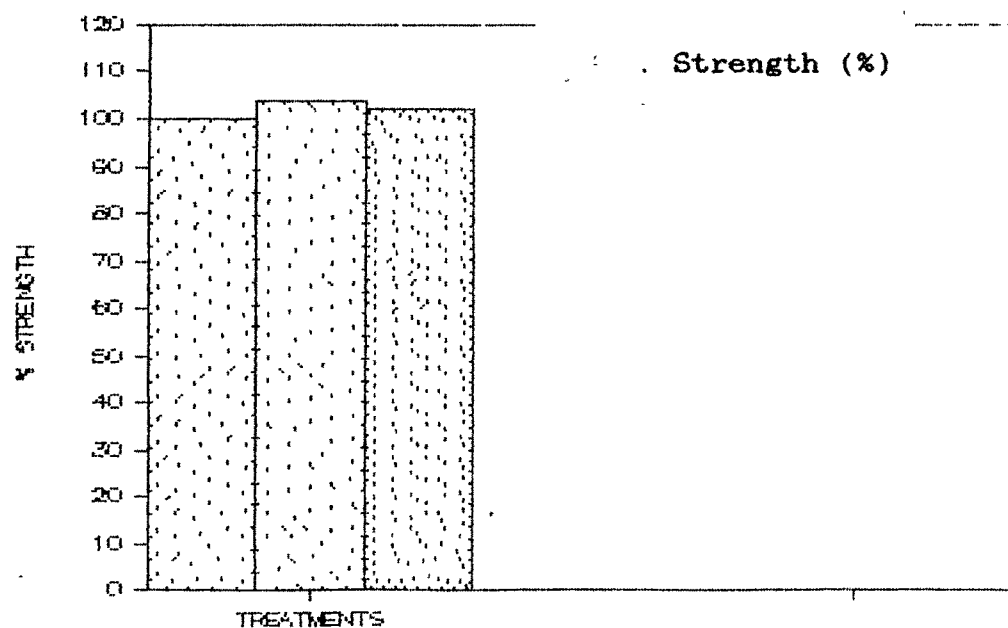
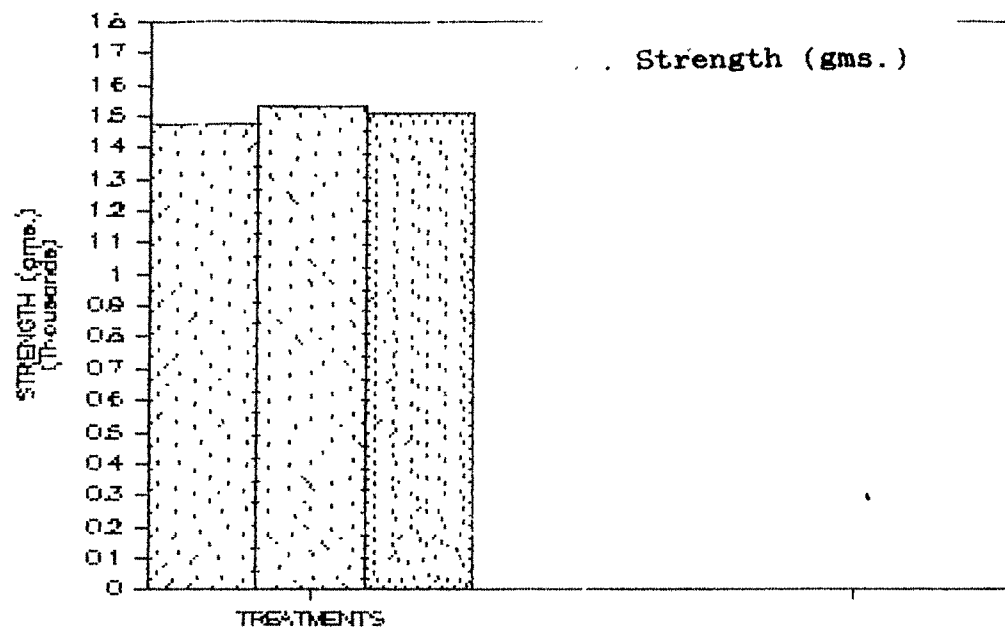
T = 5% acrylamide polymer finish

2

T T = 5% acrylamide polymer finish (on chlorine pretreated)

c 2

Figure 37 Effect of 5% acrylamide polymer finish on tearing
strength of wool fabric (W)
2

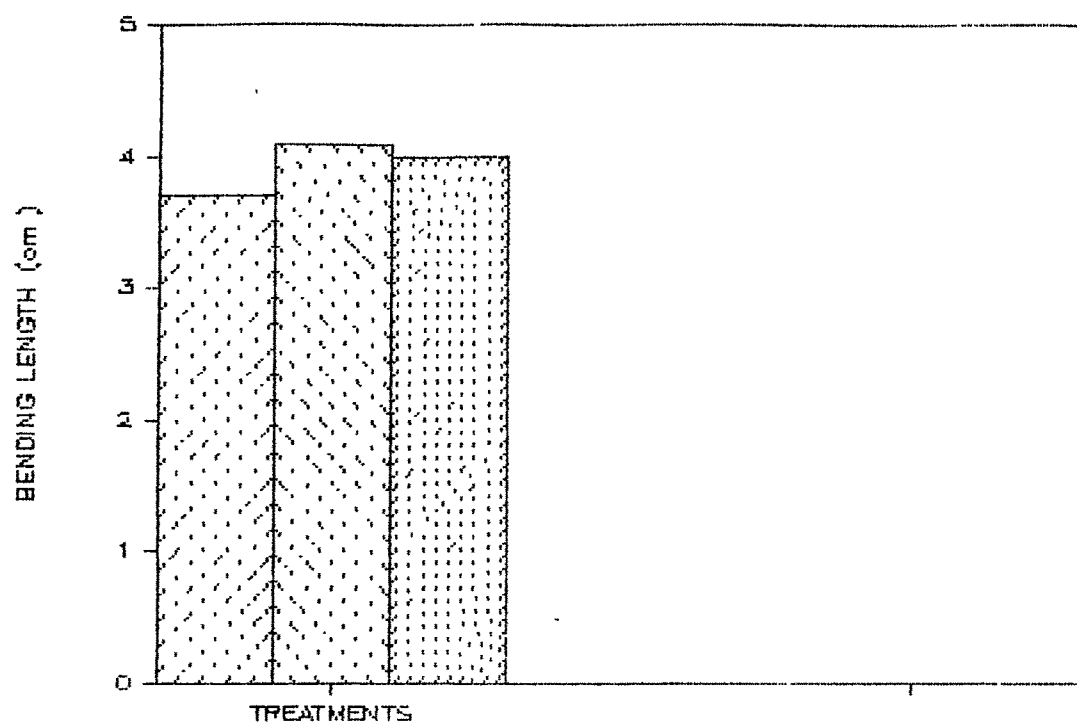


Untreated

5% acrylamide polymer finish

5% acrylamide polymer finish (on chlorine pretreated)

Figure 38 Effect of 5% acrylamide polymer finish on bending
length of wool fabric (W)
2



Untreated

5% acrylamide polymer finish

5% acrylamide polymer finish (on chlorine pretreated)

Table 35 Wrinkle recovery^o of wool fabric (W) treated
2
with 5% acrylamide polymer finish

Treatments	Wrinkle Recovery ^o		
	W	F	(W + F)
T	135.5	128.1	263.6
Ø			
T	143.8	129.6	273.4
2			
T T	146.3	130.0	276.3
c 2			

W	= WARP	F	= WEFT

Table 36 Appearance rating of wool fabric (W) treated with
2
5% acrylamide polymer finish

Treatments	After Wrinkling	24 hrs. After Wrinkling	Cold Iron	Hot Iron (Nylon Temp.)
T	1.8	2.4	2.4	2.7
Ø				
T	1.9	2.7	2.8	3.2
2				
T T	2.1	2.8	2.9	3.5
c 2				

Standard value from 1 to 5
1 was maximum wrinkled and 5 was smoothest.

T = Untreated

Ø

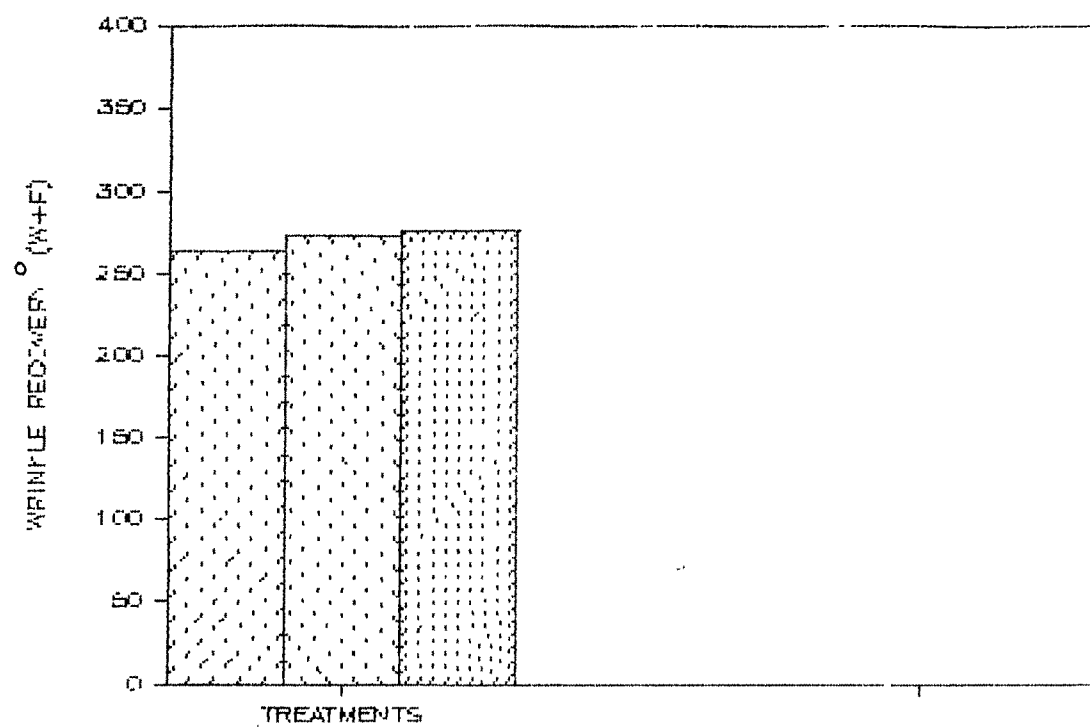
T = 5% acrylamide polymer finish

2

T T = 5% acrylamide polymer finish (on chlorine pretreated)

c 2

Figure 39 Effect of 5% acrylamide polymer finish on wrinkle
recovery⁰ of wool fabric (W)
2

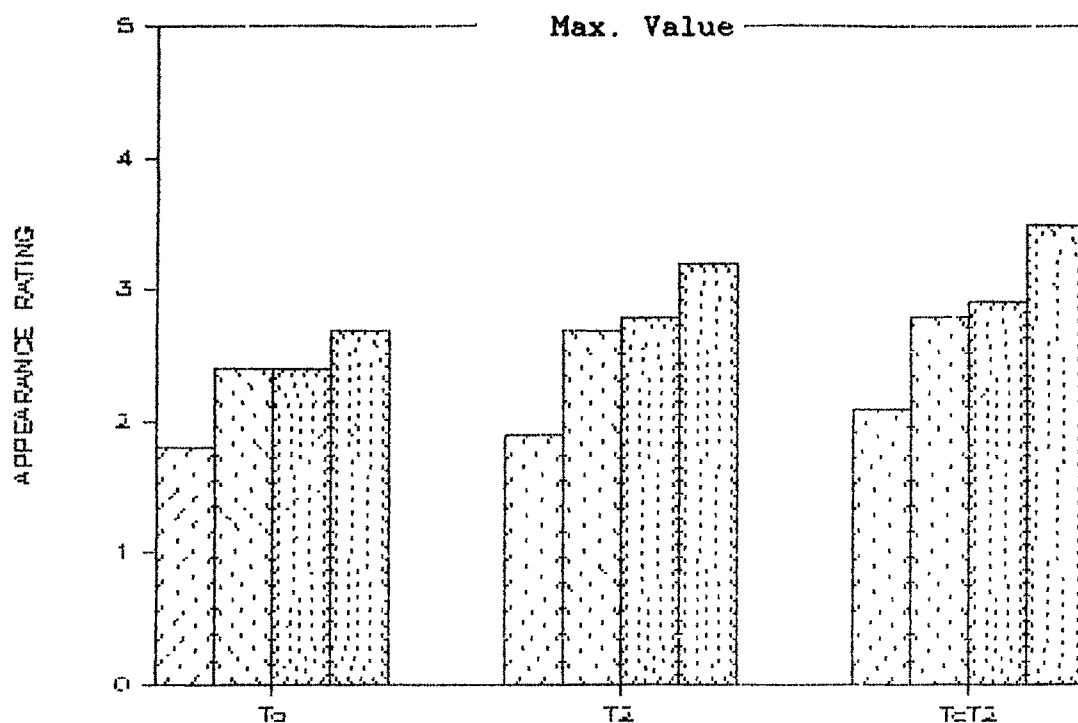


Untreated

5% acrylamide polymer finish

5% acrylamide polymer finish (on chlorine pretreated)

Figure 40 Effect of 5% acrylamide polymer finish on appearance rating of wool fabric (W)
2



-  After wrinkling
-  Twenty-four hrs. after wrinkling
-  After ironing with cold iron
-  After ironing at nylon setting

T = untreated

o
T = 5% acrylamide polymer finish

2
T T = 5% acrylamide polymer finish (on chlorine pretreated)
c 2

Table 37 Percent retention of pleats in wool fabric (W₂)
treated with 5% acrylamide polymer finish

Treatments	Static release	After washing	After drying
T	32.3	0.0	24.5
Ø			
T	68.5	9.1	46.5
2			
T T	78.7	21.2	60.8
c 2			

Table 38 Percent retention of pleats in wool fabrics (W₁, W₂)
treated with 5% acrylamide polymer finish

Fabric	Treatments	Static release	After washing	After drying
Wool (W ₁)				
1	T	39.8	0.0	39.5
	Ø			
	T	69.9	10.0	59.9
	2			
Wool (W ₂)				
2	T	32.3	0.0	24.5
	Ø			
	T	68.5	9.1	46.5
	2			
	T T	78.7	21.2	60.8
	c 2			

T = Untreated

Ø

T = 5% acrylamide polymer finish

2

T T = 5% acrylamide polymer finish (on chlorine pretreated)

c 2

Figure 41 Effect of 5% acrylamide polymer finish on retention
of pleats in wool fabric (W)
2

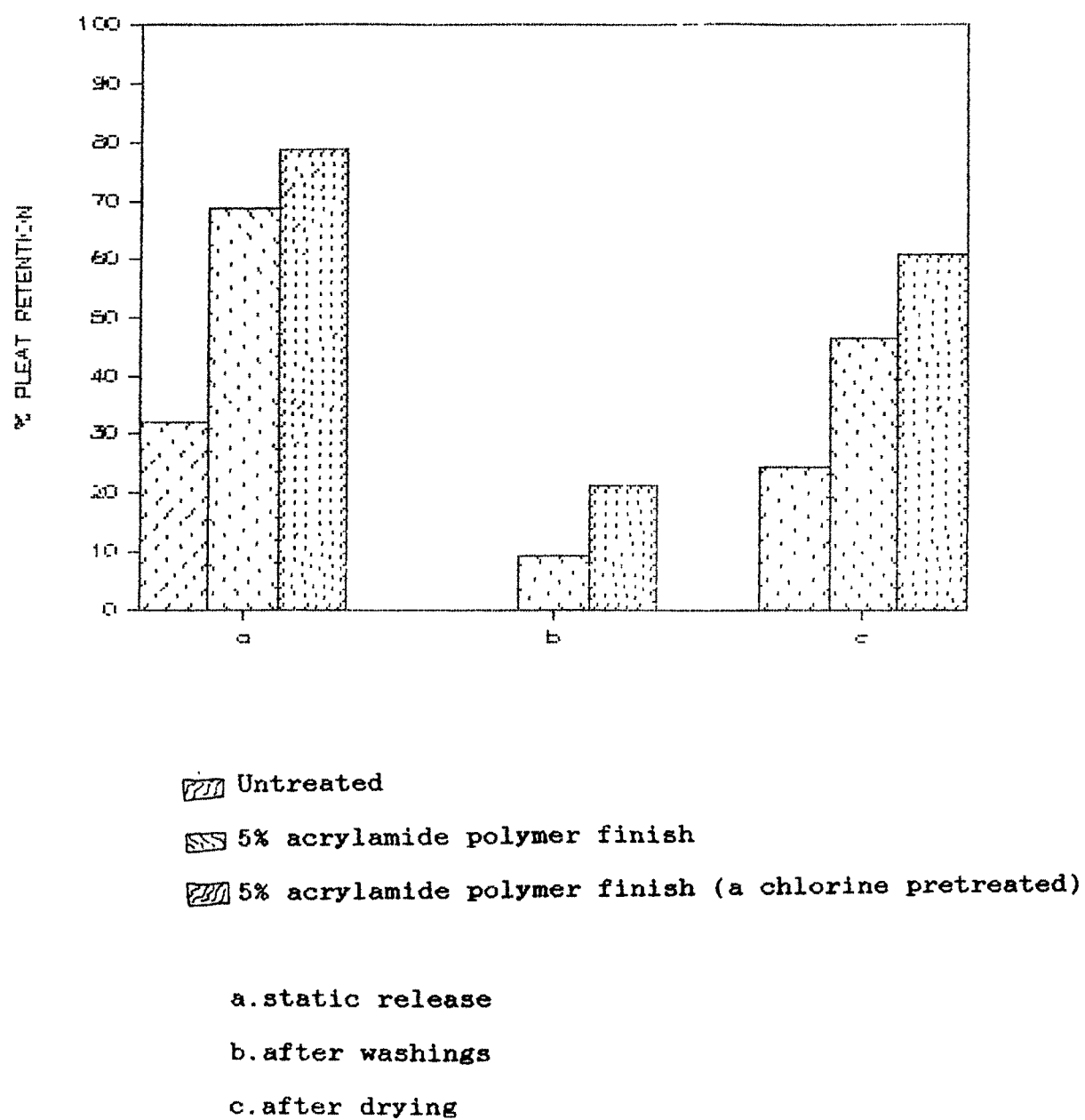
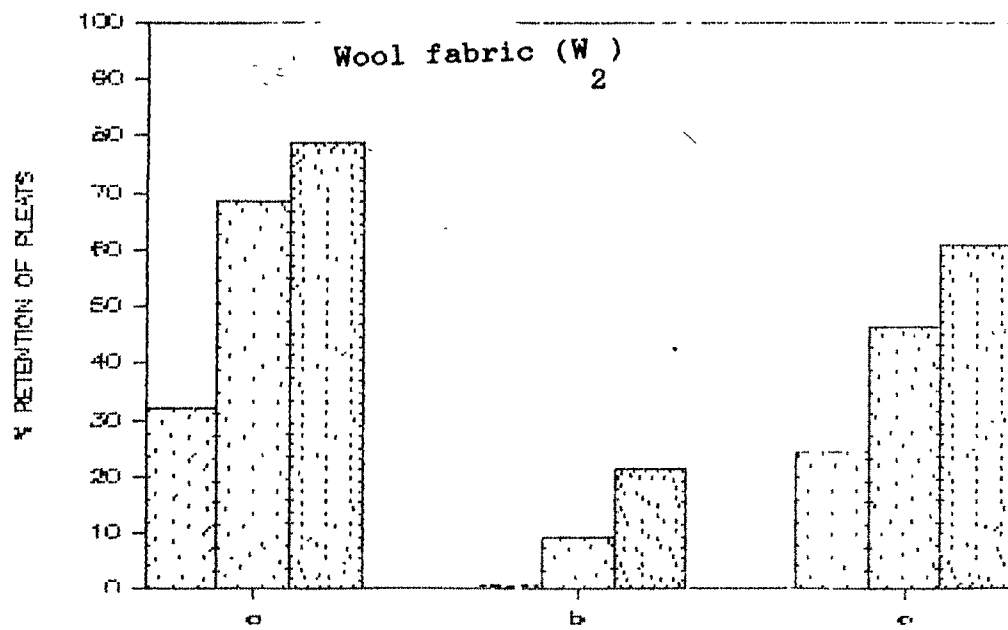
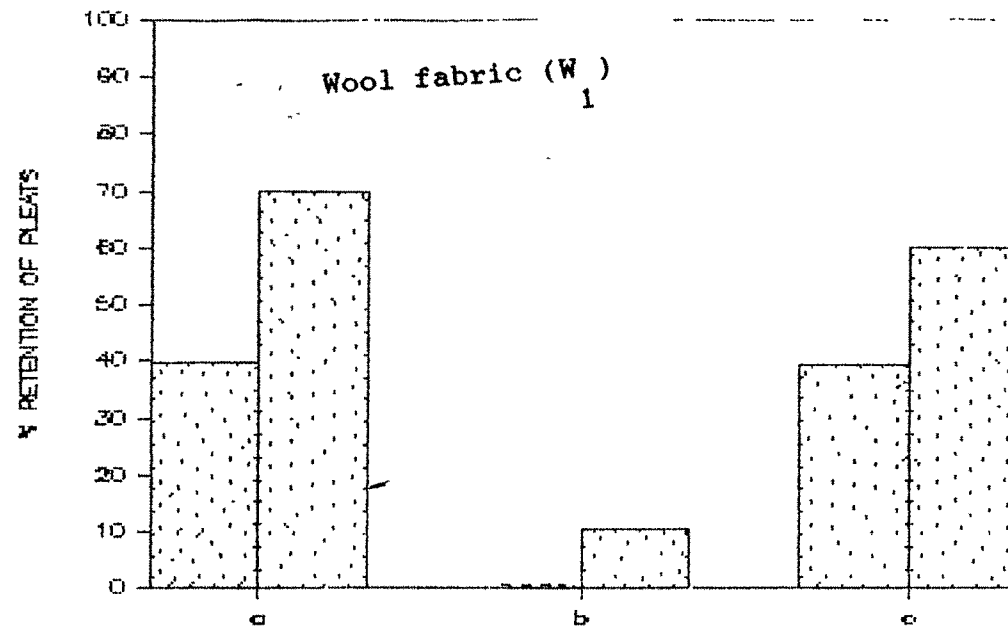


Figure 42 Effect of 5% acrylamide polymer finish on retention of pleats in wool fabric (W₁ and W₂)



- ▨ Untreated
- ▩ 5% acrylamide finish
- ▧ 5% acrylamide finish (on chlorine pretreated)

- a. static release
- b. after washing
- c. after drying

Table 39 Percent finish on acrylamide treated wool
fabric (W) before (a) and after (b) washing
2

Treatments	a	b	% Finish
T	6.8	5.0	73.5
2			
T T	7.1	5.9	83.0
c 2			

Table 40 Wrinkle recovery⁰ of acrylamide treated wool
fabric (W) before (a) and after (b) washing
2

Treatments	Wrinkle Recovery ⁰ (W + F)	
	a	b
T	263.6	268.5
0		
T	273.4	278.8
2		
T T	276.3	276.0
c 2		

W - WARP F - WEFT

Table 41 Bending length of acrylamide treated wool
fabric (W) before (a) and after (b) washing
2

Treatments	Bending Length (cms.)	
	a	b
T	3.7	3.7
0		
T	4.1	3.9
2		
T T	4.0	4.0
c 2		

T = Untreated

0

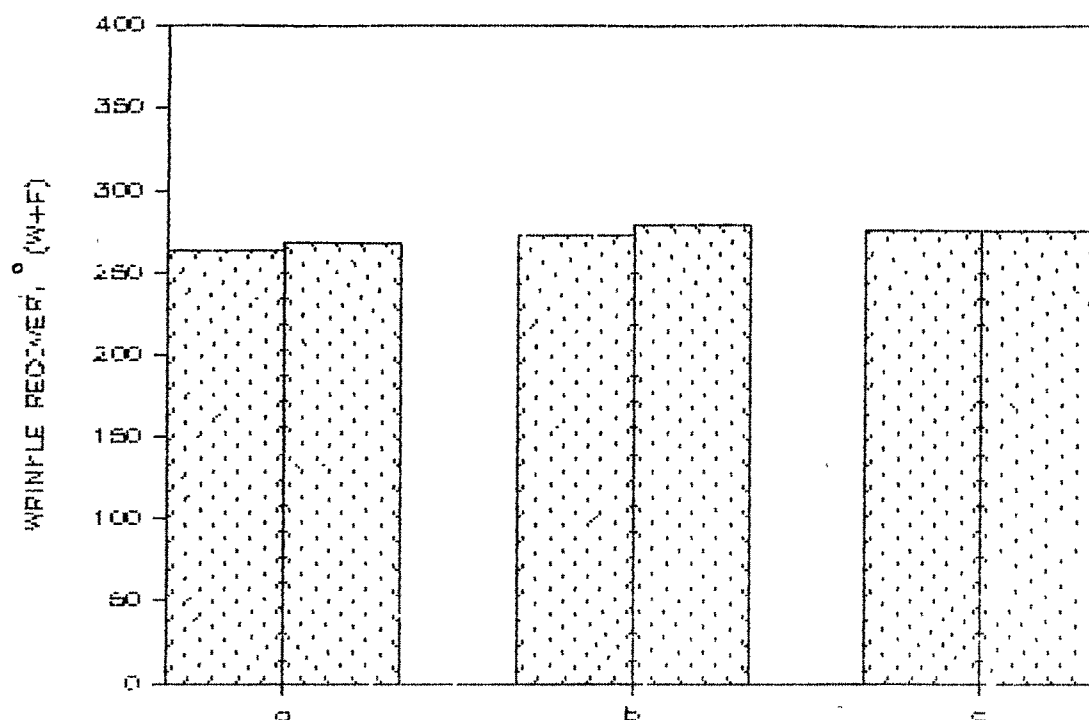
T = 5% acrylamide polymer finish

2

T T = 5% acrylamide polymer finish (on chlorine pretreated)

c 2

Figure 43 Effect of 5% acrylamide polymer finish on wrinkle recovery^o of wool fabric (W) before and after washing.
2



a. Untreated

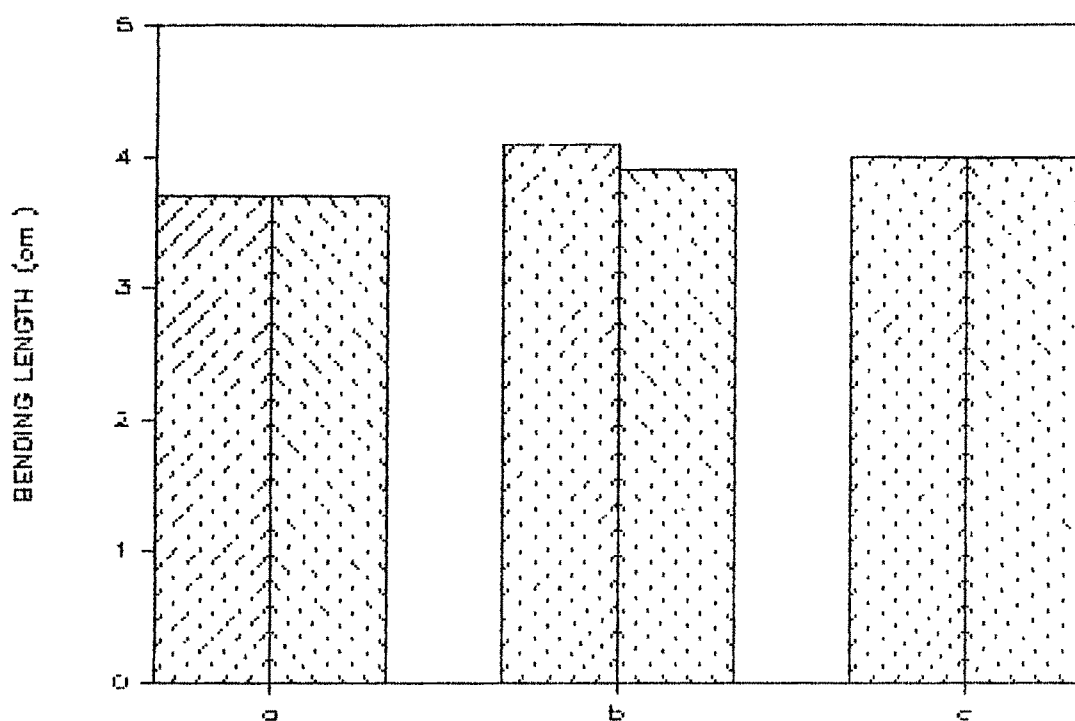
b. 5% acrylamide finish

c. 5% acrylamide finish (on chlorine pre-treated)

▨ Before washing

▩ After washing

Figure 44 Effect of 5% acrylamide polymer finish on bending length of wool fabric (W_2) before and after washing.



a. Untreated

b. 5% acrylamide finish

c. 5% acrylamide finish (on chlorine pre-treated)

▨ Before washing

▩ After washing