



USE OF INSTRUMENTS FOR MEASURING COTTON PROPERTIES Inquiries made to the Textile Research Center indicate that interest in the instrument evaluation of cotton is increasing. We have had a number of requests for information on this subject, and many of the visitors to the Center wish to discuss the advantages that can be realized from instrument testing. Not only has considerable attention been given to this by representatives of textile companies in the United States, but a surprising amount of interest has come from other countries.

We have continued our research into this subject by utilizing the Motion Control 3000 and Spinlab 800 units with emphasis directed toward thorough evaluation of a given cotton on both systems. The study presented in this edition of *Textile Topics* began last year and was first reported in the July 1982 issue (Vol. X, No. 11). At that time, we had in operation the Motion Control 3000 System only and could not include testing results from the Spinlab 800 Series.

A review of the report given in that issue shows that two entire bales of cotton were divided into one-quarter pound samples and thoroughly tested in order to determine the amount of variation in each bale. It can be seen that the results were for short-to-medium and medium-to-long cottons. At the time the project was conducted, we had not yet received the Spinlab instruments, and it was decided to retain the samples until these were installed. When fiber testing for the 1982-83 crop year was completed, the samples were removed from storage and reconditioned for additional testing. The results are given in the following table.

TABLE I

	MOTION CONTROL HVI 3000 SYSTEM				SPINLAB HVT 800 SERIES			
	Micronaire	Length	Uniformity Ratio	g/tex Strength	Micronaire	Length	Uniformity Ratio	g/tex Strength
Average	4.064	0.998	77.890	24.067	4.103	1.027	44.180	22.760
S. D.	0.083	0.024	1.401	1.559	0.104	0.018	1.273	1.219
% CV	2.042	2.404	1.799	6.478	2.526	1.728	2.882	5.356
Range:								
High	4.4	1.13	83	32	4.6	1.13	52	28
Low	3.8	0.88	72	17	3.6	0.90	39	18

The data shown in Table I were obtained from the short-to-medium cotton only. Testing was conducted on 1,780 samples, both in the first part and again in this study. We want to mention that the Motion Control data given in Table I are not exactly the same as those reported last July. The reason for this is that we first calculated results on the basis of sub-groups of four, these coming from double-line testing. However, when we realized we would be working with individual values obtained from the Spinlab instruments, we recalculated the original Motion Control data so that the averages, standard deviations and coefficients of variation would be based on individual values. Obviously, it would be misleading to compare the results of an analysis of individual values with those obtained from averaging sub-groups. Therefore, Table I gives the same information reported in last July's *Textile Topics*, except that it has been recalculated based on individual values. Also, the table shows comparable results obtained from the Spinlab instruments.

"Single-line" and "double-line" are designations indicating the number of tests made on a given sample. Single-line means two tests (one from each side) are made on a bale sample. Double-line indicates a double amount of testing is done, or four tests per bale sample. We mention this because a comparison has been made between the values obtained using single-line and double-line data from testing 100 samples on both the Motion Control (MCI) and Spinlab equipment. This is shown in Table II below.

TABLE II

	MICRONAIRE		LENGTH		STRENGTH	
	MCI Double Line Data	Spinlab Single Line Data	MCI Double Line Data	Spinlab Single Line Data	MCI Double Line Data	Spinlab Single Line Data
Average	4.057	4.21	1.029	1.017	23.44	22.08
S. D.	0.0817	0.1146	0.0173	0.0162	1.329	1.206
% CV	2.0184	2.723	1.6805	1.594	5.669	5.462
	MCI Double Line Data	Spinlab Double Line Data	MCI Double Line Data	Spinlab Double Line Data	MCI Double Line Data	Spinlab Double Line Data
	MCI Double Line Data	Spinlab Double Line Data	MCI Double Line Data	Spinlab Double Line Data	MCI Double Line Data	Spinlab Double Line Data
Average	4.057	4.16	1.029	1.019	23.44	22.46
S. D.	0.0817	0.1094	0.0173	0.0165	1.329	0.888
% CV	2.018	2.630	1.6805	1.620	5.669	3.954

As indicated at the beginning of this report, there have been a great number of inquiries about the use of the two systems. We trust the information presented here will be useful to those who have asked about one or the other. All fiber testing at the Textile Research Center is conducted by Mrs. Reva Whitt, head of the materials evaluation laboratory, and our staff of fiber technicians.

TEXTILE ENGINEERING STUDENT AWARDS

With the completion of the 1982-83 school year

and graduation on May 14, Texas Tech University's Department of Textile Engineering recognized several seniors for outstanding achievement at an awards luncheon. Graduating senior Jane G. Kveton of Abernathy, Texas received the highest honor by being named for two awards. These were the Textile Veteran's Association Award, given by a New York-based philanthropic organization, and the L. E. Parsons Award, presented to the graduating senior with the highest academic record. For many years, Parsons was on the faculty of TTU's Department of Textile Engineering.

Other seniors receiving recognition for outstanding achievement, and receiving awards from the Textile Research and Scholarship Foundation, were Alan But-



Jane Kveton, recipient of two honors, accepts a check from Professor L. E. Parsons for the award given in his name.



Outstanding Achievement awards from the Textile Research and Scholarship Foundation were presented to (l to r) Alan Buttenhoff, Pam Rabon, Suzanne Dyess and Dana Godwin.

tenhoff of El Paso, Texas; Suzanne Dyess of Lubbock; Dana Godwin of Jackson, Mississippi; and Pamela Rabon of Pearland, Texas.

We are truly proud of the accomplishments of these seniors and congratulate them on the awards received in recognition of their good work. It has been a pleasure having them as students, and we wish them the best of luck as they begin new careers in industry and graduate studies.

HONOR STUDENTS Students at Texas Tech University have the opportunity to be named to the President's Honor Roll (requiring a Grade Point Average of 4.0) and to the Dean's Honor Roll for their respective College (requiring a GPA of 3.50 or higher). The Department of Textile Engineering is pleased to have had several students included in the Engineering Dean's Honor Roll for the 1983 spring semester. These were Jane Kveton of Abernathy, TX with a GPA of 3.75; Karen Hansen of Mercedes, TX, 3.63; Keith Soechting of New Braunfels, TX, 3.50; and Sohail Barlas of Sialkot, Pakistan and Chetankumar Patel of Ndole, Zambia, both with a GPA of 3.57.

Other students with GPA's of 3.0 or higher were Twila Braun and Stacey Stone of Seminole, TX; Alan Buttenhoff, El Paso, TX; Mary Ann Owen, Tahoka, TX; Zurinah Pawanteh, Selengor, Malaysia; and Nelson Roll, Lubbock, TX. We would like to congratulate these students for attaining these high grades. It is always gratifying when the efforts of the department's faculty are rewarded by students' scholastic achievement.

VISITORS Visitors to the Textile Research Center in May included Warren Schwalm, Booth Electro-systems Inc., Greenville, SC; Steve Clark, Gentex Corporation, Carbondale, PA; Gary Maddux, West Point Foundry & Machine Co., West Point, GA; P. R. Smith, Tyson Foods, Inc., Springdale, AR; Surin Songtanin, Sawandaloke Cotton Mill, Ltd., Bangkok, Thailand; and Justin Gutnecht, Institut de Recherches du Coton et des textiles, Montpellier, France.