NATIONAL BUREAU OF STANDARDS REPORT

8645

REPORT ON INTERNATIONAL TRAVEL TO LATIN AMERICA

TO

PARTICIPATE IN THE DEVELOPMENT OF
PAN-AMERICAN STANDARDS FOR TEXTILES

October 26 - November 14, 1964

By

Josephine M. Blandford

Technologist (Textiles)

Materials Evaluation Laboratory

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

THE NATIONAL BUREAU OF STANDARDS

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1. ABSTRACT

This report gives (1) an account of the Second International Seminar on Textile Products, a working meeting of Technical Committee 6 on Textiles of the Pan American Standards Commission (PASC or, in Spanish, CPANT), held in Lima, Peru from October 26 through November 14, 1964; (2) comments and action on 26 PASC Draft Recommendations, 17 of which were approved as Project 1, 2 as Drafts (No. 1A and No. 1), 2 as "Schemes" (developed during the Seminar), 2 tabled, and 3 withdrawn; (3) opinions on the importance and desirability of continuing the PASC/C6 program on textiles standards; (4) and agreement on an agenda for a 1965 meeting or Seminar of PASC/C6. Subjects for thirty-eight textile standards, considered pertinent to the needs of Latin America, were suggested for the agenda.

A brief account of discussions on the Pan-American standardization activities in Central and South America is included. The information given is that obtained during conversations with U. S. Embassy officials and others in Lima and Guatemala City.

2. SPONSOR

This activity was sponsored by the National Bureau of Standards in cooperation with the American Standards Association (ASA) which represents both the industrial and Governmental interests of the United States in international standards organizations. The Pan-American Standards program of ASA is directed by Committee L23 of ASA. To accomplish this work, Committee L23 receives technical guidance from other national organizations concerned with the development of textile standards: Committee D-13 on Textile Materials of the American Society for Testing and Materials (ASTM); the Executive Committee on Research of the American Association of Textile Chemists and Colorists (AATCC); the National Bureau of Standards (NBS), assigned the responsibility for the Federal Standard Test Methods for Textiles of the General Services Administration (GSA).

3. THE INTERNATIONAL SEMINAR ON TEXTILE PRODUCTS

3.1 INTRODUCTION

By way of introduction, the first International Seminar on Textile Products, held in 1963, was eminently successful in that of 18 PASC Draft Recommendations approved by the Seminar, 15 have since been accepted as Pan American Standards by the member countries of PASC (CPANT).

The second International Seminar on Textile Products, under the auspices of the Organization of American States (OAS), was a working meeting of Technical Committee 6 on Textiles of the Pan-American Standards Commission[1] (PASC/C6). It was held in Lima, Peru, from October 26 through November 14 at the Instituto Nacional de Normas Técnicas Industriales y Certificacion (INANTIC). INANTIC, the official standards organization of Peru, holds the Secretariat for Pan-American Standards for Textiles.

The objective of the Seminar was to develop textile standards for Latin America, a continuation of the program initiated in 1961 and advanced in 1962 and 1963. Two reports by Dr. Herbert F. Schiefer, NBS Consultant on Textiles, and one by this writer discuss the programs and accomplishments of these years. They are NBS No. 7585 (August 6, 1962); NBS No. 7770 (December 19, 1962); and NBS No. 8196 (February 26,1964).

The Seminar form of meeting, so successful in 1963, was that of the 1964 working meetings of PASC/C6. Again it brought together, at one time and in one place, delegates of the member countries of PASC and provided the time required for the discussion, development, and approval of a number of standards constituting a most ambitious program. In addition to these very obvious advantages, the Seminar afforded an excellent opportunity for the delegates to become acquainted (or to renew the friendships of 1963), and to discuss and cooperate on matters of mutual interest to our American countries.

Because of representation by the member countries of PASC, and attendance by all of the active members of the Technical Committee, the Recommendations developed and approved by the Seminar were equivalent to one of the stages of the PASC procedures (Article 5 of the By-Laws) for their acceptance. Consequently, the Seminar provided a means for accelerating the adoption of international standards for Latin America.

Thirteen countries were represented by delegates at the Seminar: Argentina, Brazil, Colombia, Costa Rica[2], El Salvador[2], Guatemala[2], Honduras[2], Mexico, Nicaragua[2], Peru, Uruguay, the United States, and Venezuela. Chile, a member country of PASC, was not represented, but participated by letter.

[1]Formerly, the Pan American Standards Committee.

[2]The Instituto Centroamericano de Investigacion y Technologia Industrial (ICAITI) in Guatemala has been designated as the official standards organization to represent the Central American Textile Association, of which the five Central-American countries are members.

The agenda for the Seminar comprised 24 PASC Recommendations. The subjects of these had been decided upon at the 1963 Seminar of PASC/C6 on the basis of their meeting the immediate needs of the textile industries of Latin America. The preliminary work and the drafting of these Recommendations was most competently accomplished by the Technical Secretariat and its Subcommittees.

Señora Le Roux de Carrillo, adscript to the Direction of INANTIC and PASC/C6, was Director of the Seminar. The preparation for the Seminar by INANTIC, involving many details and much work, was complete and excellent. Señora de Carrillo's splendid direction of the Seminar, and the seemingly tireless energy and friendliness of the entire staff of INANTIC, contributed immeasurably to its success.

3.2 DELEGATES

Delegates from nine countries attended the Seminar: Argentina, Brazil, Colombia, Guatemala[3], Mexico, Peru, Uruguay, the United States, and Venezuela[4]. Chile, a member country of PASC, participated by letter. The names of all delegates are given in the minutes of the Seminar (See Appendix).

The United States was represented by twelve delegates who were accredited by the American Standards Association, the U. S. member of PASC. The names and affiliations of these are: Prof. Dame S. Hamby, School of Textiles, N.C. State College (Leader); Josephine M. Blandford, Materials Evlauation Laboratory, National Bureau of Standards (Alternate Leader); Edward W. S. Calkins, U. S. Department of Agriculture; Claude S. Clutz, Celanese Fibers Co.; Louis A. Fiori, U. S. Department of Agriculture; Prof. Kenneth L. Hertel, The Univ. of Tennessee; Prof. F. Fritz Kobayshi, Lowell Technological Institute; Everet W. Lothrop, Jr., American Viscose Corp., FMC Corporation; George W. Pfeiffenberger, Plains Cotton Growers, Inc.; Rose V. White, American Standards Association.

[3] ICAITI (Guatemala) represented the five Central-American countries: Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua.

[4] It was most unfortunate that the delegate from Venezuela, because of a family emergency, could not remain for the duration of the Seminar.

Professor Hamby, Leader of the U. S. Delegation attended the Seminar from October 26 to November 6; Miss Blandford, Alternate Leader of the U. S. Delegation, and Miss White, for the full period, October 26 through November 14. The other delegates were present for shorter periods, each attending those technical sessions relating to the delegate's area of specialization.

3.3 AGENDA

The program for the Seminar consisted of 24 PASC Draft Recommendations on subjects proposed by the 1963 PASC/C6 Seminar as those which should be given priority because of their immediate usefulness to the textile industries of Latin America. The drafts were prepared by the Technical Secretariat (INANTIC) and its Subcommittees. The majority of these were based on previously submitted standards of the ISO, ASTM, AATCC, and to a lesser degree upon methods of test developed by the Latin-American countries.

Before the Seminar, the Draft Recommendations were circulated for review and comment within the member countries of PASC by the national standards organizations in Central and South America, Mexico and the United States. The comments were then considered by INANTIC and the Recommendations revised accordingly. The revised Recommendations were again circulated for comment and review. The composite of comments thus obtained represented the official opinions of the countries represented and were those expressed by the respective delegates at the Seminar.

The agenda comprised 24 Draft Recommendations: 7 on wool; 10 on fibers and yarns; 2 on colorfastness, and 5 on cloths. Consideration was given to these in the order scheduled.

The agenda is given in the Appendix.

3.4 OPENING OF THE SEMINAR

The formal inauguration of the Second Pan-American Seminar on the Standardization of Textile Products was held on October 26 at the National University of Engineering upon invitation by Ing. Mario Samame Boggio, Rector of the University, President of the National Comission of Technical Standards, and President Elect of the Pan-American Technical Standards Committee (CPANT).

The program was under the auspices of the Organización de Estados Americanos (OEA), the Comité Panamericano de Normas Técnicas (CPANT), and the Instituto Nacional de Normas Técnicas Industriales y Certificación (INANTIC). It was interesting, informative, and inspiring.

Señor Boggio, other eminent personages from the University, OEA, CPANT, and INANTIC presented brief addresses which emphasized the success of the 1963 Seminar. It was stated that the principal objectives of the Seminars are 1) to accelerate Pan-American standardization and, 2) to make available in a short time standards that permit commercial interchange between the American countries, facilitated by a technical language common to all the American countries, and so essential to the commercial transactions on both national and international levels. This second Seminar, it was emphasized, is of the utmost importance in furthering and achieving these objectives.

On conclusion of the program, the guests and dignitaries were guests of Señor Boggio at a cocktail reception. It was most enjoyable and provided a relaxed atmosphere for further discussion and the initiation and renewal of friendships.

3.5 CONDUCT OF SEMINAR MEETINGS

Professor Juan V. Cabrerizo, Field Director of OAS, opened the first technical meeting of the Seminar saying that the work of the Seminar is that of an international committee studying matters of great interest to the continent. He explained that: 1) the Seminar would be conducted according to the OEA (OAS) and CPANT (PASC) rules[5]; 2) that matters decided by the Delegation to be of importance would be voted upon; 3) that those making the decisions (voting) must be present at least 85 per cent of the time; 4) that each country had one vote (to be cast by the leader of the Delegation); 5) that approval of actions and Recommendations requires a unanimous ballot; 6) that voting abstentions constitute negative votes.

[5] A detailed account of the rules of conduct to which the Seminar conformed is given by this author in NBS report 8196 (1964), available upon request.

The meeting was then turned over to Señora de Carrillo who provided further information:

1 - The morning and afternoon sessions would convene at 8:30 AM and 2:30 PM, respectively;

2 - That Editorial Committees, appointed to prepare revised drafts of Recommendations discussed during the day, would meet at the conclusion of the afternoon meeting and remain in session until completion of the revision. (These hours ranged from 10-11 PM and sometimes 2-3 AM.)

3 - That an appointed secretary would write the minutes of each session which, with the revised Recommendations, would be available (in Spanish and English) for the next day's meetings. (The fact that this was accomplished is a credit to the long hours worked by the INANTIC staff.)

3.6 ACCOMPLISHMENTS: ACTIONS ON RECOMMENDATIONS

Following is a summary of actions taken on the Recommendations considered by the Seminar:

	Approved				Tabled	With-drawn
Subject	Project 1	Draft 1A	Draft 1	Schemes (new)		
Wool	5	1	1	-	-	-
Fibers and Yarns	7	-	-	-	2	1
Color-fastness	2	-	-	-	-	-
Cloths	3	-	-	2	-	2
TOTAL	17	1	1	2	2	3

Those Recommendations which were approved as Project 1 are but one stage away from their adoption as PASC Standards, i.e., formal action by the member countries of PASC.

In contrast to this advance stage of development are the "Schemes", i.e., drafts of new Recommendations which must be studied and commented upon by the member countries of PASC prior to their being considered at the 1965 meetings or Seminar of PASC/C6.

A brief account of the action taken on each Recommendation is given in the subsequent sections.

3.6.1 SECTION I - WOOL

Chairman: Señora Susana Le Roux de Carrillo (Peru)

Dates Discussed	Recommendations: Modification of; Action on
10/26,29	PASC 6-001, WOOL - METHOD OF CORE SAMPLING OF RAW WOOL IN PACKAGES FOR DETERMINATION OF PERCENTAGES OF CLEAN WOOL FIBER PRESENT.

This method, based on ASTM D 1060-64, was approved as Project 1 following minor technical modifications and editorial changes: to add a note on precision after Table I to indicate which values of "k" (number of cores per sampled packages) will not give the precision specified; to retain Table I as in D 1060, and to also retain Table II because needed to apply the mathematical formulae in the body of the method. The latter was transferred to the Appendix.

10/27,30	PASC 6-002, WOOL - METHOD OF TEST FOR DETERMINING AVERAGE WOOL FIBER DIAMETER (FINENESS) BY THE PROJECTION MICROSCOPE.

This method, based originally on ISO R 137, and modified considerably according to ASTM D 2130-61, was approved as Project 1. Modification included: agreement on a specimen length of 400 microns; blending and carding of fibers before putting in the microtome, and putting the description and drawings of the microtome in the Appendix; acceptance of the ASTM wedge as an alternate device and procedure; the rejection of the ASTM sampling plan; and inclusion of a chapter on sampling (proposed by Argentina, ICAITI, and Mexico).

Dates Discussed	Recommendations: Modifications of; Actions on

PASC 6-002 (Continued)

Although the approval of the sampling plan was unanimous, Brazil did so with the reservation that further statistical study be made.

Approved was a proposal by Peru to circulate to all member bodies of PASC a standard sample so that a study might be made to determine statistically whether the results of measurements are affected by using different specimen lengths.

10/26 PASC 6-003, WOOL - METHOD OF TEST FOR DETERMINING WOOL FIBER LENGTH USING A COMB SORTER.

This method, based on the Schlumberger apparatus used by the IWTO, was tabled pending information on lengths of intervals to be obtained from IWTO by the Technical Secretariat and then circulated to the member countries of PASC.

Discussions on this Recommendation were animated and extensive. Many opinions were expressed: the Schlumberger is practically unknown in the United States or in Latin America but (according to Mexico) used by the IWTO to arbitrate international transactions of wool top; the Schlumberger is already a part of a DGN Project Standard in Mexico; the Schlumberger is in an ISO method corresponding to that of IWTO and, according to PASC principles, ISO procedures should have first priority. (Its status remains Draft 1A.)

There was unanimous agreement that a method on the Suter apparatus be written corresponding to ASTM D 519. (See PASC 6-007.)

10/28,30 PASC 6-004, WOOL - METHOD OF TEST FOR DETERMINING VEGETABLE MATTER AND ALKALI - INSOLUBLE IMPURITIES IN SCOURED WOOL.

This method, based on ASTM D 1113-62, was approved as Project 1 following minor editorial changes.

PASC/C6 requests ASTM to provide the photograph required. (Granted.)

Dates Discussed	Recommendations: Modifications of; Action on
10/29,30	PASC 6-005, WOOL- METHOD OF TEST FOR DETERMINING THE NUMBER AND SIZE OF NEPS AND VEGETABLE MATTER, AND THE NUMBER OF COLORED FIBERS IN WOOL TOP.

This method, based on ASTM D 1770-62T, was approved as Project 1 following editorial modification which included changing the length ranges and segment of reference length for vegetable matter, Figure 2 (ASTM), from inches to millimeters.

10/30,31 PASC 6-006, WOOL - METHODS OF TEST FOR DETERMINING WOOL CONTENT OF RAW WOOL (LABORATORY SCALE).

This method, based on ASTM D 584-57, was approved as Project 1 after extensive editorial revision.

10/30 PASC 6-007, WOOL - METHOD OF TEST FOR DETERMINING FIBER LENGTH IN WOOL TOP.

This method, based on ASTM D 519-58 and the use of the Suter wool fiber stapling apparatus, was written by the Editorial Committee upon unanimous vote of the Delegation following withdrawal of PASC 6-003 on the Schlumberger apparatus. Its development during the time of the Seminar was permitted by the fifth article of the By-Laws of CPANT.

Following a continuation of the lively discussion of the Schlumberger vs the Suter apparatus, a vote to approve this method as Project 1 was defeated: 1)it refers to an apparatus and technique not studied in two of the member countries of PASC and, 2) because, before approval, it should be circulated for study and review by all member countries. This method was subject to minor editorial changes inclusive of substituting 10-mm class intervals for 0.5-in. intervals in Table I. It finally was approved as Draft 1 so that it may receive further study before advancement to Project 1.

PASC/C6 requests the ASTM to provide the D 519-photograph required. (Granted.)

SUMMARY: SECTION I

Of the 7 Recommendations considered, 5 were approved as Project 1, 1 approved as Draft 1, and 1 held as Draft 1A pending acquisition and review of further information on the apparatus concerned. The final acceptance and use of these standards will constitute an important contribution to the wool-fiber industries of Latin America.

3.6.2 SECTION II: FIBERS AND YARNS
Chairman: Senor Felix E. Von Ranke (Brazil)

Dates Discussed	Recommendations: Modifications of; Actions on
11/2,4	PASC 6-034, YARNS - METHOD FOR EVALUATING THE APPEARANCE OF COTTON YARNS ACCORDING TO STANDARDS.

This method, based on ASTM D 2255-64, was approved as Project 1 after prolonged discussion and extensive editorial revision. The resultant modifications were: substitution of "Tex Number" for "Linear Density" in Table I; inclusion, in Chapter 5, of a sampling plan, Table II (emperic), and provision for taking a laboratory sample in the absence of statistical sampling procedures; describing the system of illumination to be used; and including provisions for evaluating yarns from 2 or more lots.

It was suggested that the United States consider for the future, the rounding off of the values given in Table I.

11/3	PASC 6-035, FIBERS - METHOD OF TEST FOR NUMBER OF NEPS IN COTTON SAMPLES.

This method, based on ASTM D 1446-59T, was withdrawn as it does not conform to the requirements of a PASC Recommendation: it considers a stage of industrial processing and is not applicable to the buying and selling of raw cotton.

Dates Discussed	Recommendations: Modifications of; Action on

11/3,5 PASC 6-036, FIBERS - METHOD OF TEST FOR DETERMINING THE NON-LINT CONTENT OF COTTON BY MEANS OF THE SHIRLEY ANALYZER.

This method, based on a method of the Shirley Institute, was approved as Project 1 after some discussion and extensive editorial revision. The major modifications were: limiting the method to the Shirley analyzer; inclusion of a statement that the definitions included are "for purposes of this Recommendation"; modification of Tables I and II on the speeds and settings of the analyzer; classification and expansion of the chapters on sampling and procedure; and addition of a statement on precision as related to raw cotton.

Following approval by the Delegation to retain paragraph 9.1.2.7 on residual lint, as given in Draft Recommendation 2, the Chairman requested that all delegates discuss it upon return to their respective countries, in preparation for a final "yes" or "no" vote when the Recommendation is submitted to their countries for approval as a PASC Standard.

11/3,5,10 PASC 6-037, YARNS - METHOD OF TEST FOR THE DETERMINATION OF BREAKING LOAD AND ELONGATION (SINGLE YARN METHOD).

Because of the many objections to this method, it was withdrawn. After much discussion of an ISO method (considered a project) and study of ASTM D 2256-64, it was agreed to draft a new method based on that of ASTM. The development of this method during the time of the Seminar was permitted by the By-Laws of CPANT.

This new method, "YARN - TENSILE TEST FOR SINGLE YARNS", was approved as Project 1. It is not applicable to yarns made from fibers such as asbestos, glass, flax, hemp, ramie, kraft paper, or to products such as cords for tires and cables.

Dates Discussed	Recommendations: Modifications of; Actions on

PASC 6-037 (Continued)

Its provisions are similar to those of D 2256 except that 1) the distance between clamps can be 500 ± 5 mm or 250 ± 5 mm but, in case of dispute the distance must be 500 ± 5 mm; 2) pre-tension on the specimen was changed from 0.25 g per tex (ASTM) to 0.05 (ISO).

11/3,4,5,6 PASC 6-038, FIBERS - METHOD OF TEST FOR DETERMINING MOISTURE OF COTTON FIBERS.

This method, although finally approved as Project 1, was the subject of intense and prolonged discussion revolving around: expansion of the Scope to include determination of moisture of all fibers (rejected); deletion of the alternate method on the use of the dessicator (rejected); addition of a chapter on sampling of fibers, yarns, and other products not covered by existing drafts (rejected).

The method as approved contains a number of chapter modifications and editorial changes to be incorporated by the Technical Secretariat prior to its future review.

Because of the diverse opinions expressed during the discussions, the strong plea of Uruguay for a method with an expanded scope and sampling plan, the information made available on a method used successfully in Brazil, and the offer of Mexico to collaborate on the preparation of another method (on "lots" of fibers and yarns, and to include sampling), a technical committee was appointed to prepare the draft. The committee was chaired by Uruguay and assisted by Mexico, Argentina and others who prepared the draft after hours.

The resultant method, DETERMINATION OF MOISTURE CONTENT IN COTTON BALE LOTS, with additional information to be supplied by Uruguay and Brazil was submitted to the Technical Secretariat for its later presentation as Draft Recommendation 1.

Dates Discussed	Recommendations: Modification of; Action on
11/4,6	PASC 6-039, FIBERS - METHOD OF TEST FOR DETERMINING MATURITY OF COTTON FIBERS.

This method, based on ASTM D 2495-61T, was tabled because no agreement could be reached on the instrument to be used. Discussed were the causticaire, microscopic counting, and differential dyeing techniques, although the latter is not considered by the United States to be an indication of maturity.

The method was returned to the Technical Secretariat for redrafting using as reference B. S. Standard 3085.

11/5 PASC 6-040, YARNS - METHOD OF TEST FOR UNEVENNESS OF YARNS, YARN INTERMEDIATES, AND SIMILAR PRODUCTS.

This method was tabled to permit further study following discussion of the Uster eveness tester, a Hungarian apparatus said to be similar in principles and results obtained, and other evenness devices such as the Fielden and Brush.

Although the Uster was acceptable to everyone, agreement was reached to redraft the method to include devices other than the Uster only if they give the same or equivalent values as the Uster; if not, the revision is to be based on the Uster and the ASTM procedure.

The preferred sources of information were agreed to be ASTM D 1425-60T, an ISO Tentative Recommendation, and the Uster manuals. These are to be turned over to the Technical Secretariat for evaluation and use in the preparation of the method indicated.

11/5,7 PASC 6-029, FIBERS - METHOD OF TEST FOR DETERMINING THE LENGTH OF COTTON FIBERS BY MEANS OF COMB CLASSERS.

This method was approved as Project 1 after extensive revision based on ASTM D 1440-55. It was prepared by an appointed Technical Committee.

Dates Discussed	Recommendations: Modifications of; Actions on

PASC 6-029 (Continued)

Major modifications were made in the procedure and in the expression of results, and concerned: the accuracy of weighing, handling and measuring the specimen; measurement of each length distribution by two operators; the precision required in reporting upper and mean quartiles, and use of the following symbols approved by the Delegation:

σ = Standard deviation

σ^2 = Variance

V_m = Coefficient of variation of weight

V_l = Coefficient of variation of length

$\bar{L}$ = Mean length.

11/7,9 PASC 6-043, FIBERS - METHOD OF TESTING MAN-MADE STAPLE FIBERS.

This method, based on ASTM D 540-64, was approved as Project 1 following minor modification and editorial changes: deletion of reference to the vibroscope procedure; inclusion of a sampling plan proposed by Brazil; changing the boil-off bath and rinse temperatures in 6.7.5.4 from "70 °C" to "70 to 75°C".

11/9,11 PASC 6-044, FIBERS - METHODS OF TEST FOR IDENTIFICATION OF FIBERS IN TEXTILES.

This method, based on ASTM D 276-62T, was approved as Project 1 following editorial revisions which included: elimination of "compound" microscope in the Spanish version which will use "P.A." grade for U. S. "reagent" grade; inclusion of generic terms as they are in English rather than attempt to put them into Spanish; substitution of "clockwise" and "counter-clockwise" for "right" and "left" in noting the twist in vegetable fibers; expansion of directions on the use of the microtome (described in PASC 6-002) for cutting and mounting thin sections; and inclusion of a chapter on "report" and "expression of results".

Dates Discussed	Recommendations: Modifications of; Actions on

PASC 6-044 (Continued).

It was agreed, upon a proposal by Argentina, to include in this method the trade names of fibers common to Latin America when and as they become available.

SUMMARY: SECTION II

Of the 10 Recommendations considered, 7 were approved as Project 1, 2 were tabled for further study and revision, and 1 was withdrawn. The significance of these standards lies in their being of practical value to the textile mill whether used in quality control or as bases for the buying and selling of man-made and cotton fibers and yarns.

3.6.3 SECTION III: COLORFASTNESS; FABRICS
Chairman: Señora Le Roux de Carrillo

Dates Discussed	Recommendations: Modifications of; Actions on
11/10,11	PASC 6-030, COLORFASTNESS - TERMINOLOGY, DEFINITIONS AND GENERAL PRINCIPLES.

This Recommendation, prepared by the Technical Secretariat, was an extension of ISO R 105, Part 1. After much discussion and revision to a Recommendation titled COLORFASTNESS - GENERAL PRINCIPLES OF TESTING, a counterpart of ISO R 105, Part I only, it was approved as Project 1.

The reasons for this modification and revision are explained in subsequent paragraphs.

There was much discussion of the first draft and a lack of enthusiasm for it. Argentina proposed its replacement by one it submitted to the Technical Secretariat (in Spanish) and also based on ISO R 105, Part I, but numbered according to the PASC system; the United States stated it considered the title misleading and that the deviations from the ISO document present in PASC 6-030 detracted from its value, and did not cover, as indicated, terminology and definitions.

Dates Discussed

Recommendations: Modifications of; Actions on

PASC 6-030 (Continued)

Although discussed, there was no agreement on the suggestion to revise PASC 6-030 into two Recommendations; Argentina expressing a desire for action on the Argentine draft before drafting a Recommendation on definitions, and the United States maintaining a preference for a revision of PASC 6-030 based only on Part I of ISO R 105.

Following a United States proposal "that PASC/C6 accept ISO R 105, Part I (verbatim) to replace PASC 6-030 and to consider terminology and definitions as subjects for a new standard at a later date" (Approved), and the proposal of Argentina "that the Argentine draft be translated into English and be studied during the Seminar" (Approved), the Chairman appointed an Editorial Committee to translate and compare the Argentine draft with that of the ISO and to prepare the revised Recommendation in collaboration with the United States.

The resultant Recommendation PASC 6- 030 titled COLORFASTNESS- GENERAL PRINCIPLES OF TESTING is synonymous with ISO R 105, Part I except that it conforms in form and decimal numbering system to that of PASC. It was noted that the only definitions included are those pertinent to its understanding.

Of additional interest to the reader may be the statement made by the Chairman, Señora de Carrillo, during discussions on colorfastness terminology and definitions, that a new Standard on this subject would be submitted in the future; that a Technical Sub-Secretariat is already working on its preparation.

The United States informed the Delegation that word had just been received by cable of its acceptance of the Sub-Secretariat on Colorfastness, and was extremely pleased to have this responsibility.

Dates Discussed	Recommendations: Modifications of; Actions on

11/10,11,12 PASC 6-015, COLORFASTNESS TO BLEACHING WITH HYPOCHLORITE

Background Information.- This Recommendation was considered during the 1963 Seminar at which time agreement could not be reached on the method because of the differences of opinion regarding the test temperatures: substitution of the AATCC test temperature of 27 ± 3°C (proposed by the United States) for the 20 ± 2°C specified by the ISO, the United States maintaining that the former was more representative of the alteration factor which takes place in practice.

As a result of the lack of unanimity, the method was tabled and a decision made to conduct experiments to compare the AATCC and the ISO test methods employing these two temperatures, the Technical Secretariat to conduct the study.

In the summer of 1964 PASC 6-015 was distributed to the member countries of PASC for approval as a PASC Standard. The United States cast a negative vote, not having received word or results of the experiments in question.

Upon arrival at the 1964 Seminar, the U. S. Delegation was informed that both the AATCC and ISO methods had been studied, and that the results had been circulated to the member countries of PASC informing them of the favorable results obtained with the AATCC test temperature.

Action at the Seminar.- The Chairman explained to the Delegation that the approval of PASC 6-015 is pending due to the negative vote cast by the United States because, for reasons unknown, information was not received on the Technical Secretariat's studies which showed no significant differences in the results obtained using AATCC and ISO test temperatures.

Dates Discussed

Recommendations: Modifications of; Actions on

PASC 6-015 (Continued)

The United States explained its previous position and expressed its willingness now to approve this Recommendation if it includes both temperatures (27 ± 3°C and 20 ± 2°C) and a requirement for reporting the temperature used.

After some discussion, in which Mexico, Peru and Uruguay stated that no significant differences in results were obtained in their tests, agreement was reached to: 1) add to paragraph 6.5.3, "optionally, a temperature of 27 ± 3°C, with which the test is more rigorous, may be used"; 2) to add a new paragraph, "6.6.2 - Report the test temperature (6.5.3)."

The Recommendation as modified was voted upon and approved as Project 1.

11/11,12 PASC 6-031, CLOTHS - METHOD OF TEST FOR THE DETERMINATION OF TEAR RESISTANCE.

This method, based on ASTM D 1424-63, was approved as Project 1 following modification, extensive editiorial revision, and a change in title to one more appropriate: FABRICS - METHOD OF TEST FOR THE DETERMINATION OF TEAR RESISTANCE BY MEANS OF ELMENDORF -TYPE TESTERS.

Major changes in the method were: restricting the test apparatus to Elmendorf-type testers; redefining "length of cut"; specifying that at least 5 warp and 5 filling specimen be tested; clarifying the chapter on preparation of the specimen; requiring that the "report" state the make, type, and range of scale of the tester used.

Brazil expressed an interest in a tongue-tear method based on ASTM D 2261 and recommended it be suggested to the Technical Secretariat for future consideration.

Dates Discussed	Recommendations: Modifications of; Actions on

11/12,13 PASC 6-032, FABRICS - METHODS OF TEST FOR THE DETERMINATION OF YARN NUMBER.

This method was approved as Project 1, following much discussion and both technical and editorial revisions.

The basic changes in the method were: providing for the use of cut and un-cut specimens; providing two procedures, a direct-counting and a ravel method, for counting yarns per inch, the second to be designated as the reference method; specifying that 3 warp and 3 filling specimens be tested from each test sample; deletion of chapter 5 on "sampling and inspection" except for relocating paragraph 5.2 on preparation of the specimen.

Interest was expressed in developing, for future needs, a similar standard applicable to circular and warp knits.

11/12 PASC 6-033, CLOTHS - METHOD OF TEST FOR THE DETERMINATION OF BURSTING STRENGTH.

This method, based on manufacturers instructions on the Schiller machine, was withdrawn: it was thought not a good method; sufficient information was not available on it; it was considered unsuitable for use in Latin America.

Although it was pointed out that there is not yet a Subcommittee on Knit Goods, the Delegation favored developing a diaphragm bursting strength method for knit goods based on one distributed last year (Method 5122 of U. S. Federal Specification CCC-T-191b). Accordingly, a proposal was approved to remove PASC 6-033 from the agenda and send it to the Technical Secretariat with the suggestion that its revision be considered in 1965.

Dates Discussed	Recommendations: Modifications of; Actions on

11/13,14 PACS 6-041, CLOTHS - METHOD OF TEST FOR THE DETERMINATION OF BREAKING LOAD AND ELONGATION.

This method, the complete revision of which was based on ASTM D 1682-64, was approved as Project 1, titled FABRICS - TENSILE TESTS, following extensive discussion on the testing requirements considered essential.

The revised Recommendation, prepared by a special Technical Committee, establishes grab and ravel-strip procedures for determining the maximum load and elongation of woven cloth, based on the use of CRT and CRE machines, respectively.

11/13 PASC 6-042, CLOTHS - METHOD OF TEST TO DETERMINE WATER PERMEABILITY.

Because of general dissatisfaction with this method it was withdrawn as not being applicable to the needs of Latin America.

Discussions of water repellency indicated that the spray, hydrostatic, and drop penetration methods were those used chiefly in Central and South America.

The submission and discussion of two tests, Spanish versions of AATCC Standard Test Methods 18-1964 and 22-1964, resulted in the approval of a proposal by Argentina that these tests be given the status of "Schemes". They will, consequently, be submitted to the Technical Secretariat for study and action according to PASC procedures.

11/14 These new "Schemes", considered suitable for use in Latin America are:

PASC 6-046, CLOTHS - METHODS OF TEST FOR DETERMINING WATER RESISTANCE BY THE HYDROSTATIC PRESSURE METHOD. (AATCC Standard Test Method 18-1964)

PASC 6-047, CLOTHS - METHODS OF TEST FOR DETERMINING WATER REPELLENCE (ARTIFICIAL RAIN METHOD). (AATCC Standard Test Method 22-1964)

SUMMARY: SECTION III

Of the 7 Recommendations considered, five were approved as Project 1, 2 were withdrawn because not applicable for use by the textiles industries of Latin America, and 2 new "Schemes" were drafted. The acceptance of these Project -1 Recommendations as PASC Standards will make available to the Latin-American textile industries procedures for determining the construction, colorfastness to bleaching, and strength and elongation of fabrics. Their use will make possible an improvement in the quality and uniformity of fabrics.

3.7 RELATED ACTIVITIES

3.7.1 ROUND TABLE DISCUSSIONS

Wool

A round table discussion, chaired by Señor Goyret, the Uruguayan Delegate, was held on October 31. Its purpose was two-fold, 1) to discuss the length of fibers cut by the microtome, for inclusion in 6.4.3 of PASC 6-002 Project-1 Recommendation, and 2) to discuss subjects to be prepared for 1965 standards on wool, these to constitute recommendations for the working agenda of the PASC/C6 Subcommittee on Wool.

The discussion of fiber length vs fineness, and of the length cut by the microtome, was extensive and was resolved by 1) a suggestion that the statistical aspects of varying fiber length be the subject of interlaboratory study, and 2) a recommendation that the length cut by the microtome be 0.6 mm.

Eight subjects for standards were unanimously approved for recommendation to the Subcommittee on Wool as a working program for 1965:

Wool Classification
Determination of Moisture Content
Length of Greasy Wool
Determination of Fineness by Means of Air-Flow Apparatus
Commercial Specifications for Wool Moisture Recovery
Determination of Alkali Solubility
Grease and Soap Extraction in Wool Fiber
(Matters Which are Extractable When Washing)

The development of tentative specifications for alpaca types according to fineness constitutes the 1965 program of the Subcommittee on Camel Hairs.

PASC/C6 Seminars

A Preliminary Report on PASC/C6 Seminars, presented on November 2 by Mexico, ICAITI, Argentina, and Uruguay resulted in a round table, chaired by Senhor Von Ranke of Brazil. The principal points brought forward were: provision of English translations during technical sessions; 2) that all countries should be consulted and participate in the preparation of first drafts; 3) that, in future, only 1 draft should be considered daily, its basic points in plenary sessions, and its editorial revision in Editorial Committees; 4) that plenary sessions be held in the mornings and Editorial Committees in the afternoons; 5) that the work programs for the next year be prepared by the current Seminar and that it include subjects for standards needed for free trade and industry; 6) that some consideration be given to a Seminar sponsor for 1965. (We had been informed that OAS Project 207 is ended.)

An interesting and constructive point - by-point discussion ensued. It was emphasized that: 1) countries should be consulted on all basic points before drafts are prepared; that this had been attempted in 1963 when the Seminar proposed the 1964 agenda and decided upon the basic technical points for "Schemes"; 2) that the proposed agenda was that approved by the General Secretariat of PASC; 3) when the agenda for the 1964 Seminar was distributed by the General Secretariat, only Chile and Brazil replied; 4) that when the subjects for 1964 drafts were distributed to the member countries of PASC by the Technical Secretariat, requesting all related technical information, replies and information were sent only by Chile and the United States. (Communication problems were shown to be partially responsible for non-receipt of the request.)

It was agreed that 1) in future a deadline be set by the Technical Secretariat for the receipt of information related to subjects for drafts; 2) that, upon receiving this information and related material, priority will be assigned; 3) should comments not be received by the date specified, the Technical Secretariat may assume that approval is given by the country or countries in question.

This discussion brought to the attention of each Delegate the intricacies, problems, and inter-relation of many facets of the Seminar form of meeting. A better understanding of the cooperation and work required resulted. The report which led to this round table, the opinions expressed, and the concensus of the Delegation were referred to Professor Cabrerizo, Field Firector, for implementation.

3.7.2 VISITS TO FACTORIES AND LABORATORIES

Factories

Scheduled visits were made to three large, modern, and well-equipped mills where the Delegation obtained firsthand information on plant layouts, equipment, and manufacturing processes. In each mill all stages of manufacture, from raw material to finished product, were performed. We were impressed with the excellent equipment, laboratory facilities, versatility, and large production of each mill. It was interesting to learn that only new machinery may now be purchased for expansion or replacement, and that another economic burden is the difference in working hours of employees: 7 hours daily for women, and eight for men.

Sincere appreciation is extended to the executives of the following mills for their cordiality during our visits:

Cinsa Woolen Mills (llama, alpaca, and blends: llama/alpaca; alpaca/reworked wool)

Santa Catalina Worsted Mills (worsted and worsted/cotton blends)

Textil Algodonera S. A. Factory (cotton)

Laboratories

Laboratorio de Lamas, Programa de Ovinos y Alpacas, Universidad Agraria.- The Delegation, on October 31, visited the Laboratorio upon invitation of Sẽnor Juan Villarroel, Director of the Alpaca Laboratory and a Peruvian delegate. The tour of the laboratories, the information obtained on the correlation of field work and research, the improvement in fleeces and yield resulting from the introduction of mechanical and yearly shearing, a brief account of the new program planned for testing alpaca, and an exhibit of wool and alpaca fiber and yarns, and vicuña fabric made this a most pleasant, rewarding visit.

The hospitality of Señor Villarroel, the Head of the Department of Animal Industry Technology and the Dean of Agriculture of the Universidad Agraria, and the staff of the Laboratorio, as well as the very delicious al fresco luncheon served on the lawn contributed immeasurably to our enjoyment.

Laboratorio de Carne.- Following the tour of the Alpaca laboratories, the Delegation visited the enclosures of laboratory cattle, hogs, rats, and chickens and then the experimental sections of the Laboratorio de Carne, located on adjacent grounds at La Molina.

We were fascinated to hear of the very important research on fish and on cotton seed meal conducted to alleviate the chief dietary problems in Peru: lack of calories and protein. Fresh fish (abundant in Peru and treated chemically to destroy the fish taste and odor) is fed to hogs and chickens instead of fish meal which is more expensive. The Laboratorio is studying its effect on the nutritive value and quality of the resultant products. The Delegation was shown linked sausage made from hogs given fresh fish (treated with chemicals), and was told one could not detect a fish order or taste when eating them.

Other research was in progress on feeding concentrates of cotton seed meal plus vitamins to rats, the objective being to develop a baby food (needing only the addition of water) to provide a cheap source of calories and vitamins for the many people for whom the availability and cost of milk made its use impossible. This research is both essential and humanitarian.

3.8 PROGRAM PROPOSED FOR 1965 MEETING OF PASC/C6

As a result of suggestions made during the technical sessions, the round table on wool, and a special session on the areas in which standards are most needed by the textile industries of Latin America, 38 subjects were proposed for the bases of Recommendations to be developed during 1965. These are:

Fibers

1. Maturity of cotton fibers.
2. Method of sampling for moisture of cotton lots.
3. Quantitative analysis of blends: viscose-cotton, polyester-wool, polyester-viscose.
4. Standard on asbestos fibers.
5. Percentages of standard regain.

Yarns

6. Uster (evenness).
7. Sampling of yarns.
8. Tests for texturized yarns.
9. Specification for cord diameters.
10. Tolerances for linear density of yarns.

Fabrics

11. Conditioning of textiles.
12. Specifications for water-proof cotton canvas.
13. Qualification of defects according to a pointing system.
14. Appearance after washing of wash-and-wear fabrics.
15. Terminology of fabrics according to their construction.
16. Water permeability.
17. Tests for shrinkage to washing of cotton and flax cloths.
18. Terminology of finishings.
19. Statistical sampling.
20. Methods of test for knitted fabrics.

Colorfastness

21. Terminology of colorfastness.
22. Colorfastness to crocking (rubbing).
23. Colorfastness to heat (hot pressing), dry and wet.
24. Colorfastness to perspiration.
25. Colorfastness to carbonizing: Wool.
26. Colorfastness to oxides of nitrogen in the atmosphere.
27. Colorfastness to dyrcleaning.
28. Colorfastness to ozone in the atmosphere.
29. Colorfastness to pleating.
30. Colorfastness to sublimation in storage.

Wool

31. Wool classification.
32. Determination of moisture content.
33. Length of greasy wool.
34. Determination of fineness by means of air-flow apparatus.
35. Determination of wool pH.
36. Commercial specifications for wool moisture recovery.
37. Determination of alkali solubility.
38. Grease and soap extraction in wool fiber (Matters which are extractable when washing).

3.9 CLOSING OF THE SEMINAR

The Second Seminar on International Standards was concluded in two stages: termination of the technical sessions on November 14, and the official "acto de clausura" on the evening of November 13, both held at INANTIC.

Closing of the technical sessions.

The work of the Seminar was completed, its considerable achievements summarized, and the final minutes approved and signed by the Delegates.

Señora de Carrillo, Director of the Seminar, and Professor Cabrerizo, Field Director of OAS, expressed great satisfaction with the accomplishments of the Seminar and extended congratulations to the delegates for their interest, cooperation, and long hours of intensive work.

The delegates, in turn, thanked Señora de Carrillo, Professor Carbrerizo and the staff of INANTIC for their hospitality and expressed their appreciation of the thoughtfulness, time, and labor spent on the preparation and conduct of the Seminar. All spoke with pleasure on its success.

"Acto de Clausura".

The flags of all the member countries of PASC provided a colorful background for the reception and cocktail party which marked the formal adjournment of the Seminar.

Señora de Carrillo, Professor Cabrerizo, Señor Mario Samame Boggio, President Elect of CPANT, and members of the INANTIC staff welcomed the many guests: persons of prominence in the Universidad Nacional de Ingeniería, the Universidad Agraria, the Society of Textile Industries; executives of the Peruvian textile industries; Editors of Peruvian journals; and delegates from Mexico, the United States, Central and South America.

Excellent and brief addresses by Señor Boggio and Professor Cabrerizo emphasized the contribution made by the Seminar to the textile industries of Latin America and to the economy of our American countries. Señor Goyret of Uruguay expressed for the delegates their gratification in having participated in the standardizing activities of the Seminar, their appreciation of the hospitality and labors of INANTIC, and commented on the good will and cooperation which had prevailed.

The cocktail party and socializing which concluded the evening will be long remembered. It was extremely pleasant and included the enjoyment of unrivaled national beverages and delectable Peruvian hors d'oeuvres.

3.10 SALUDOS!

Again, with warmth and admiration, I toast all of those who shared in the friendships, pleasures, work, and rewarding experiences of the Seminar!

A toast, as well, to the continuation of this most important program, to the attainment of increasing achievements, and to cementing - through further work and association - the bonds of friendship between our American countries!

3.11 RECOMMENDATIONS

1. That, because the continuation of this Pan-American standardization program is so essential to international trade, all efforts be expended to obtain a sponsor for it.

2. That the dates and agenda for meetings of PASC/C6 be known months in advance so that ample time will be available to obtain competent technical representatives from Industry and Government as official delegates.

3. That all delegates be carefully chosen to assure that their conduct will be above reproach.

4. That, upon receipt of the agenda proposed for a seminar of PASC/C6, all technical papers and standards in the areas indicated be sent at once to the Technical Secretariat for reference in the development of Draft Recommendations.

5. That provision be made for the translation into Spanish of these papers so that both English and Spanish versions will be available for simultaneous consideration.

6. That both Seminar delegates and the national organizations representing the member countries of PASC make every effort to conform to the deadline-dates set by the Technical Secretariat.

7. To participate in the 1965 seminar or meetings of PASC/C6.

3.12 APPENDIX

3.12.1 CHRONOLOGICAL PROGRAM OF THE PAN AMERICAN TEXTILE SEMINAR TO TAKE PLACE IN LIMA, PERU FROM OCTOBER 26 THROUGH NOVEMBER 14, 1964

OCTOBER

Monday 26 (Morning)	Opening	
Monday 26 (Afternoon)	PASC SC 6:3-001	Wool - Method of Core Sampling of Raw Wool in Packages for Determination of Percentage of Clean Wool Fiber Present.
Tuesday 27	PASC SC 6:3-002	Wool - Method of Test for Determining Average Wool Fiber Diameter (Fineness) by the Projection Microscope.
Wednesday 28	PASC Sc 6:3-003	Wool - Method of Test for Determining Wool Fiber Length Using a Comb Sorter.
Thursday 29 (Morning)	PASC Sc 6:3-004	Wool - Method of Test for Determining Vegetable Matter and Alkali-Insoluble Impurities in Scoured Wool.
Thursday 29 (Afternoon)	Visit to a factory	
Friday 30	PASC Sc 6:3-005	Wool - Method of Test for Determining the Number and Size of Neps and Vegetable Matter, and the Number of Colored Fibers in Wool Top.
Saturday 31	PASC SC 6:3-006	Wool - Methods of Test for Determining Wool Content of Raw Wool (Laboratory Scale).

NOVEMBER

Monday 2 (Morning)	PASC C 6-034	Yarns - Method of Test to Evaluate the Appearance of Cotton Yarns According to Standards.

NOVEMBER

Monday 2 (Afternoon)	PASC C 6-035	Fibers - Method of Test for Number of Neps in Cotton Samples.
Tuesday 3	PASC C 6-036	Fibers - Method of Test for the Determination of Foreign-Matter Content in Cotton Fibers by Means of the Shirley Analyzer.
Wednesday 4	PASC C 6-037	Yarns - Method of Test for the Determination of Breaking Load and Elongation.
Thursday 5 (Morning)	PASC C 6-038	Fibers - Method of Test for Determining Moisture of Cotton Fibers.
Thursday 5 (Afternoon)	PASC C 6-039	Fibers - Method of Test for Determining Maturity of Cotton Fibers.
Friday 6	PASC C 6-040	Yarns - Method of Text for Unevenness of Yarns, Yarn Intermediates, and Similar Products.
Saturday 7	PASC C 6-029	Fibers - Method of Test for Determining the Length of Cotton Fibers by Means of Comb Classers.
Monday 9 (Morning)	PASC C 6-043	Fibers - Methods of Testing Man-Made Staple Fibers.
Monday 9 (Afternoon)	PASC C 6-044	Fibers - Methods of Test for Identification of Fibers in Textiles.
Tuesday 10 (Morning)	PASC C 6-030	Colorfastness - Terminology, Definitions and General Principles.
Tuesday 10 (Afternoon)	PASC C 6-015	Colorfastness to Bleaching with Hypochlorite.
Wednesday 11	PASC C 6-031	Cloths - Method of Test for the Determination of Tear Resistance.

NOVEMBER

Thursday 12 (Morning)	PASC C 6-032	Fabrics - Methods of Test for the Determination of Yarn Number.
Thursday 12 (Afternoon)	PASC C 6-033	Cloths - Method of Test for the Determination of Bursting Strength.
Friday 13	PASC C 6-041	Cloths - Method of Test for the Determination of Breaking Load and Elongation.
Saturday 14	PASC C 6-042	Cloths - Method of Test for the Determination of Water Permeability.

3.12.2 REFERENCE DOCUMENTS

The minutes of the technical sessions of the Seminar and copies of the Recommendations considered by the Seminar may be seen at the National Bureau of Standards in Washington, D. C., the American Standards Association in New York City, or in the offices of the national organizations representing the member countries of PASC.

4. DISCUSSIONS: PAN-AMERICAN STANDARDIZATION ACTIVITIES IN CENTRAL AND SOUTH AMERICA

4.1 GUATEMALA CITY, GUATEMALA: UNITED STATES EMBASSY; ICAITI

The organization of the Central American Textile Association, under the leadership of ICAITI, was completed in the early summer of 1964. Consequently, it is a great pleasure to know that the Central-American countries are, through ICAITI, cooperating fully in the standardization activities of PASC. This was evident at the Seminar and was commented on most favorably during a very pleasant conversation with Mr. Jay Phillip Freres, Second Secretary, U. S. Embassy.

A most cordial and informative morning was spent at ICAITI with Dr. Manuel Noreiga Morales, Director. Señor Guillermo Gonzāles Gōmez. Assistant to the Director, Dr. Pio Gonzāles, Director of the Standardization Division, Señorita Rocio M. Marbán and Señor Roberto Arriola de León.

From discussions and observations, I learned 1) that there is a tremendous increase in activity at ICAITI and in Central America since the formation of the Central American Textile Association; 2) that, in

cooperation with the Agricultural Department, Guatemala and other Central-American countries are growing and studying new breeds of cotton having longer length, greater fineness and strength; 3) ICAITI has a pilot plant for studying cotton length, an excellent small laboratory for studying the drawing, drafting and spinning of cotton (this, under Señor Arriola), a new paper laboratory (using TAPPI and German standards), and a food laboratory which is studying the drying, concentration, and processing of fresh fruits and vegetables with the object of expanding the market for these products and thereby increasing the economy in this area.

I saw the well-stocked general library and also the standards library, both of which are expanding. It was gratifying to hear that the NBS Journal of Research and NBS Technical News Bulletins (in which an interest was expressed last year on an exchange basis) are being received.

At the time of my visit, Dr. Pio Gonzales mentioned that the duplicating and printing problems are the same as those of last year. His request for information on specific printing machines and for standards for aeronautical materials, in which his Division is interested, have been complied with since that time.

It was a disappointment to me that Dr. Ing. Eberhard Schäfer, former United Nations Technical Advisor to the Textile Industry, had left Guatemala for a temporary assignment to the Instituto de Fomento Nacional in Managua, Nicaragua, and so was not available for my anticipated appointment. Because it was impossible to accept Dr. Schaefer's cordial invitation for a meeting in Nicaragua, and because of my interest in the current developments and future prospects of the textile industry in Central America, Dr. Schäefer had delivered to me in Lima a copy of the "Programa de Desarrollo de la Industria Textil de Hilados y Tejidos Planos de Algodon", a very excellent and comprehensive report.

4.2 LIMA, PERU: UNITED STATES EMBASSY

Several very cordial meetings with Mr. Frank A. Mau, Second Secretary, took place during the weeks of the Seminar, each providing an opportunity for the writer and other U. S. delegates to talk with him on the textile standardization program and various aspects of the textile industry in South America.

It was pleasant to renew my acquaintance of 1963 and to hear from Mr. Mau praise of the expanding knowledge of, and interest in, the standardization activities on textiles manifest throughout Latin America.

From Mr. Mau and the Agricultural Attache, Mr. Traeger (who also gave generously of his time and knowledge), we obtained a great deal of information on the cotton industries of North and Central Peru, the impact on production of the increasing number of hydro-electric plants in making more land available, and Government regulations on the planting of cotton, fruits, and vegetables. We were told that cotton is planted first and then some of the land converted to corn which will provide 2 crops a year; that one must plant 15-18 percent (of land) in fruits and vegetables, and that one is fined if more are planted; that often this law is violated, the fine is paid, and one makes a profit.

Discussed also during these visits were: the new U. S. cotton price vs its affect on manufactured products; comparison of American Upland, Peruvian , and Egyptian cotton quality; the origin of textile machinery used in Argentina, Brazil, and other South-American countries visited by several of the U. S. delegates.

To all of the persons visited in Guatemala City and in Lima, I extend my sincere thanks for their hospitality, time, and information so graciously given.


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