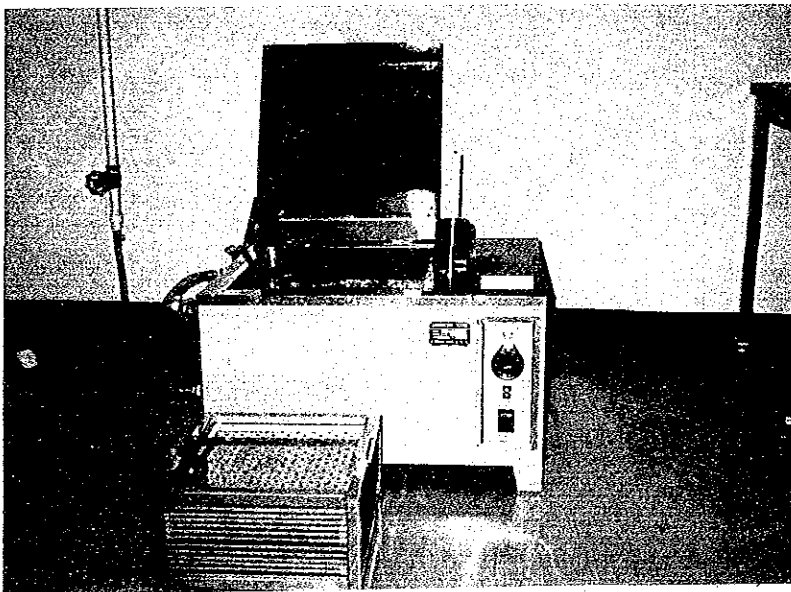
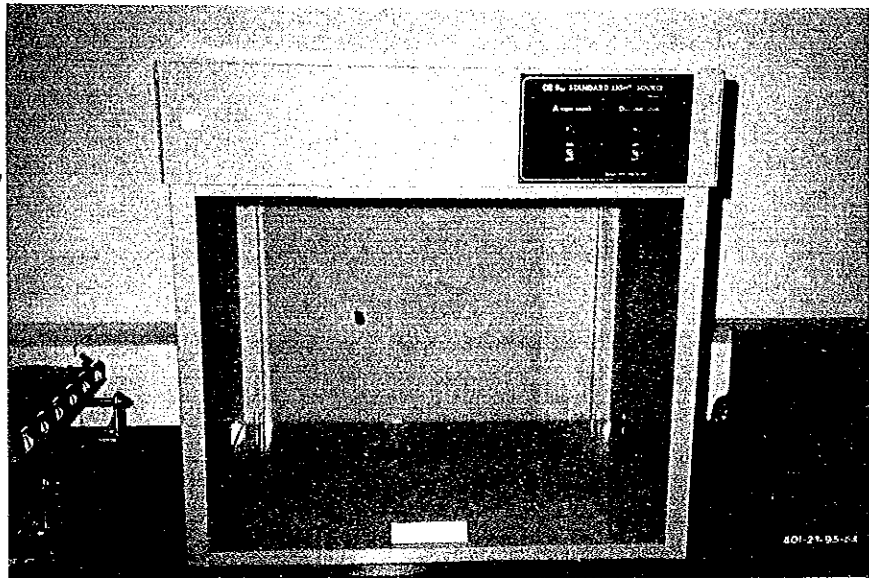
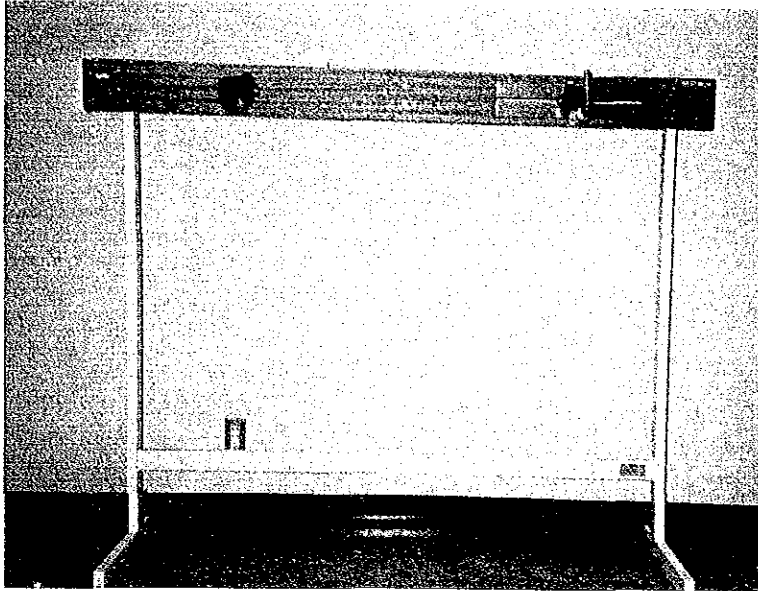


D-47 Perspiration Meter

D-48 CIE D65 Standard
Source

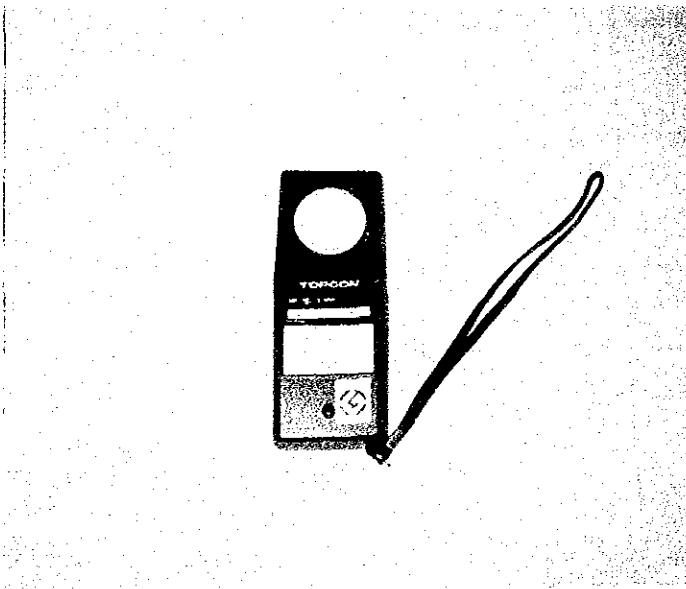
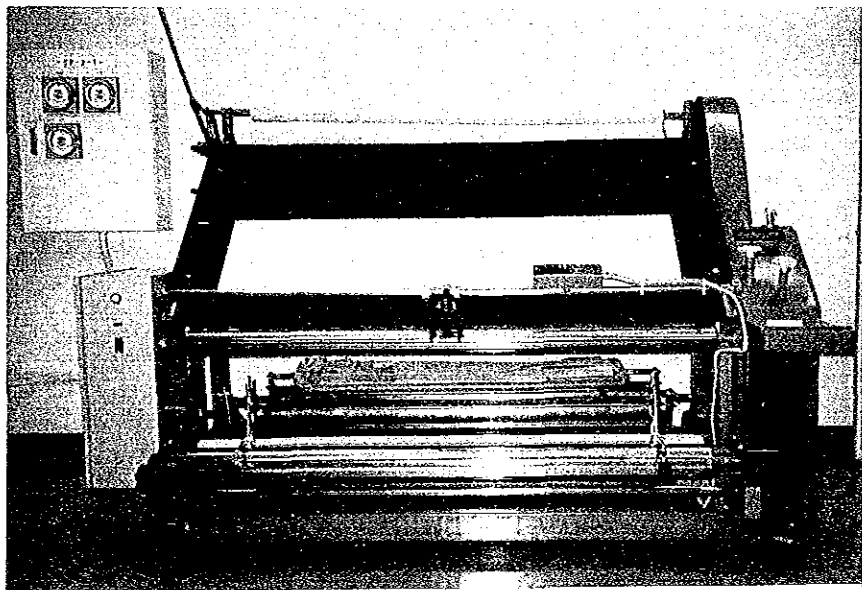


D-49 Fabric Shrinkage Tester

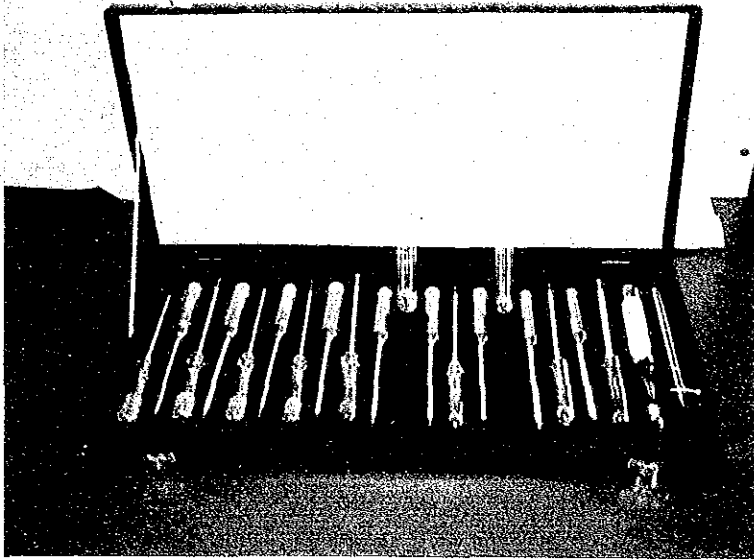


D-50 Yard Setting Machine

D-51 Fabric Inspection
Machine
(W/Testing Illuminator)

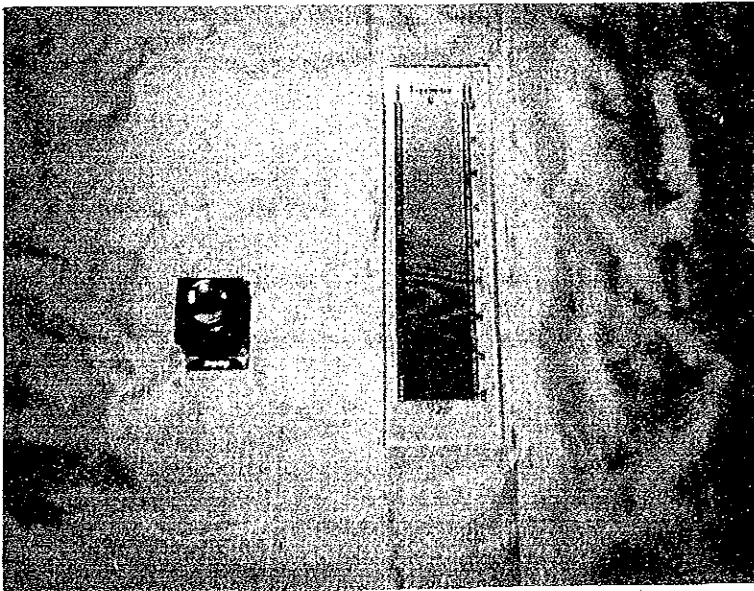
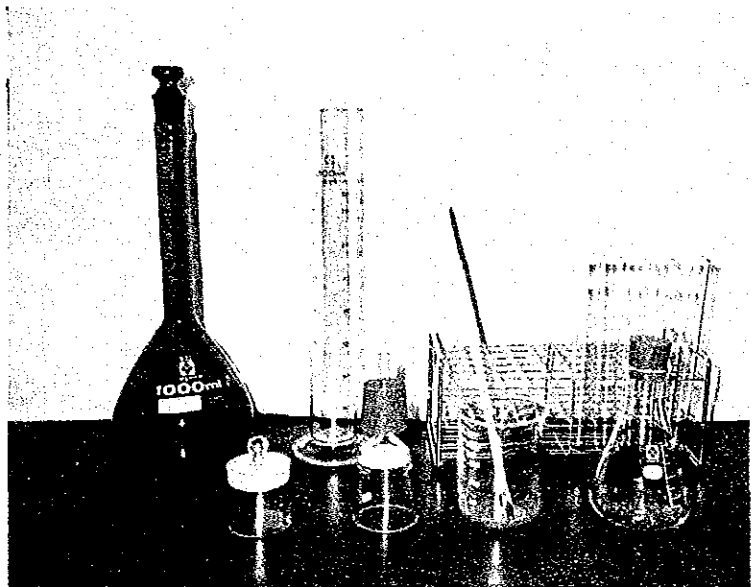


D-52 Pocket Luxe Meter

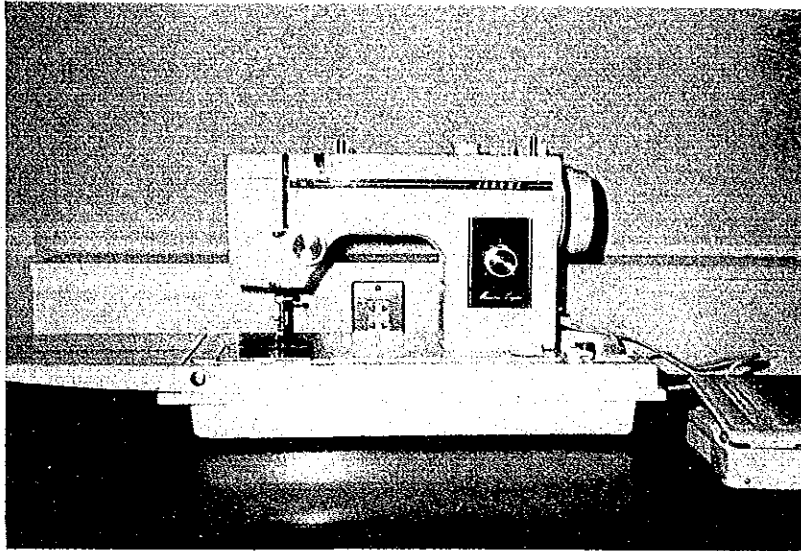


D-53 Standard Hydrometer
(SI-10)

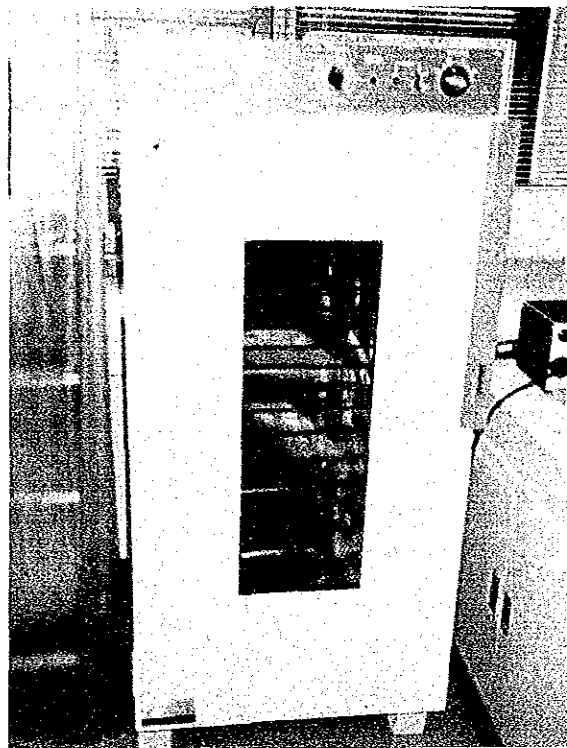
D- Glass ware



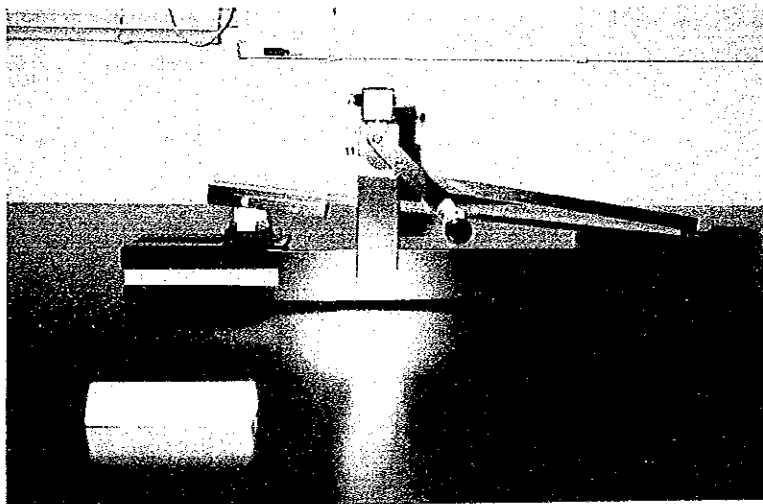
SI-1 Textile Analysing Glass
SI-13 Lunometer



SII-13 Portable Sewing Machine



SIII-1 Drying Oven



SIII-11 Crock meter

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ANNEX I

Main Machinery and Equipment for Industrial Products

<u>Item No.</u>	<u>Description</u>	<u>Q'ty</u>	<u>Maker or Brand</u>	<u>Model</u>
(Balance)				
D- 1a	Analytical Balance - A	1	Shimadzu Corporation	NL-200P
- 4	Hot Plate	6	Yamato Scientific	HK-21
- 5a	Hot Air Oven (Small Type)	2	Yamato Scientific	DK-42
- 5b	Hot Air Oven (Large Type)	1	Yamato Scientific	DK-62
- 6	Fume Hood (Draft Chamber)	5	Yamato Scientific	KDS-120
- 7a	Shaking Machine (H/V-Type)	2	Yamato Scientific	SA-31
- 10	PH-Meter	1	Toa Electronics	HM-5ES
- 11	Timer	5	Muranaka Iryoki	03074.00
- 12	Water Bath	3	Yamato Scientific	BS-48
- 15b	Vacuum Pump(Handy Aspirator)	1	Yamato Scientific	WP-35
- 17	Microscope	2	Olympus Optical	BHS-112 BH2-PC
- 31	Tensile Strength Tester	1	Shimadzu Corporation	S-100-D
- 33	Auto Still	3	Yamato Scientific	WA-32
- 36	Work Table	4	Yamato Scientific	NKM-2400
- 41	Yarn Twist Tester	1	Yamaguchi Kagaku	
- 42	Torsion Scale	1	Murayama Seisakusho	
- 43	Water Bath	1	Isuzu Seisakusho	CB-12S
- 44	Rubbing Meter	1	Yamaguchi Kagaku	FR-II
- 45	Standard Launder Meter	1	Yamaguchi Kagaku	LL-8
- 46	Standard UV long-life fade meter	1	Suga Testing Instrument	FAL-5
- 47	Perspiration Meter	1	Suga Testing Instrument	PS-V
- 48	CIE D65 Standard Source	1	Suga Testing Instrument	F65D-A
- 49	Fabric Shrinkage Tester	1	Yamaguchi Kagaku	
- 50	Yard Setting Machine	1	Yamato Scientific	SPECIAL
- 51	Fabric Inspection Machine (w/Testing Illuminator)	1	Kitamura Mfg.	KM-1WF
- 52	Pocket Luxe Meter	1	Irie Mfg.	IM-1
- 53	Standard Hydrometer	1	Nihon Keiryoki	

ANNEX II

List of Supplementary Equipment and Teaching Materials Provided by JICA

First year, 1984

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>
SI - 1	loupe (Textile analysing glass)	5 pcs
- 2	ruler (30 cm)	5 pcs
	- do.- (150 cm)	3 pcs
- 3	scissors (165 mm)	5 pcs
	- do.- (30 cm)	2 pcs
- 4	pinking scissors	1 pc
- 5	cork borer (12 pcs/set)	1 set
- 6	spatula (small)	10 pcs
- 7	test tube clamps	10 pcs
- 8	alcohol lamp	5 pcs
- 9	test tube (25 mm dia. X 20 cm)	20 pcs
-10	black light	1 set
-11	glass filter (11G1)	5 pcs
	- do.- (3G1)	5 pcs
-12	pipette (2 ml)	10 pcs
-13	lunometer	2 pcs
-14	cloth measuring tape	3 pcs
-15	hair dryer w/t transformer (800 w)	1 set
-16	steam iron	1 pc
-17	iron stand	1 pc
-18	blue scale	5 pcs
-19	gray scale	2 pcs
	- do.-	2 pcs
-20	white cloth, wool	3 pcs
	- do.-, silk 2-1	5 pcs
	- do.-, cotton	5 pcs
	- do.-, rayon	3 pcs
	- do.-, cupra	3 pcs
	- do.-, acetate	3 pcs
	- do.-, nylon	3 pcs
	- do.-, polyester	3 pcs
	- do.-, acrylic	3 pcs
	- do.-, A	7 pcs
	- do.-, B	4 pcs

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>
SI - 21	lactic acid, 500 g	1 pc
- 22	ammonium carbonate, 500 g	1 pc
- 23	sodium carbonate anhydride, 500 g	1 pc
- 24	l-histidine monohydrochloride, 25 g	2 pcs
- 25	sodium phosphate monobasic acid	1 pc
- 26	N/10 sodium thiosulfate	2 pcs
- 27	sodium chloride, 500 g	1 pc
- 28	sodium phosphate dibasic acid, 500 g	1 pc
- 29	sodium iodide, 500 g	1 pc
- 30	N/10 hydrochloric acid, 500 ml	2 pcs
- 31	methyl orange, 25 g	2 pcs
- 32	anionic surface active agent, 25 g	2 pcs
- 33	marseilles soap, 25 kg	1 pc
- 34	sodium metasilicate, 500 g	1 pc
- 35	boken stain, 200 ml	2 pcs
- 36	starch, 500 g	1 pc
- 37	tetrachloroethylene, 20 kg	1 pc
- 38	sulfuric acid, 6 kg	2 pcs
- 39	hydrochloric acid, 4 kg	2 pcs
- 40	acetone, 3 l	4 pcs
- 41	methanol, 3 l	8 pcs
- 42	soda lime, 500 g	1 pc
- 43	nitric acid, 500 ml	2 pcs
- 44	1 N. sulfuric acid, 500 ml	2 pcs
- 45	hydrogen peroxyde, 500 ml	2 pcs
- 46	sodium hydrosulfite, 500 g	2 pcs
- 47	sodium hydroxyde, 500 g	3 pcs
- 48	acetone, 500 ml	3 pcs
- 49	acetic acid, 500 ml	3 pcs
- 50	m-cresol, 500 g	3 pcs
- 51	dimethylformamide, 500 ml	3 pcs
- 52	ammonia water, 500 ml	3 pcs
- 53	sodium hydrochloride, 500 ml	20 pcs

<u>Description</u>	<u>Quantity</u>
Japanese-English Dictionary of Sericultural Terms	3 books
Weaving Technique	6 books
Dyeing Technic	3 books
Fibers	3 books
Fundamental Knowledge of Fibers	3 books
Quality Inspection of Silk (slide)	1 set
Test of Textile (slide)	1 set
JIS Yearbook	1
ISO Catalogue	1
Guide to Quality Control and Company Standardization	1
Sampling Inspection	1
Japanese Industrial Standards (JIS)	1
ISO Standards	1
Japanese Reference Book	20 vols

Second year, 1985

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>
SII - 1	test tube	20 pcs
- 2	flask with stopper (500 ml)	10 pcs
	- do.- (300 ml)	10 pcs
- 3	suction bottle (1,000 ml)	2 pcs
- 4	aspirator	3 pcs
- 5	glass filter (11 G1)	5 pcs
	- do.- (3 G1)	5 pcs
- 6	desiccator (20D - 2, 24D - 2)	4 pcs
- 7	measuring bottle (50 mm X 50 mm)	10 pcs
	- do.- (40 mm X 40 mm)	5 pcs
- 8	stainless beaker (3 l)	3 pcs
- 9	sulfuric acid bath	1 set
- 10	hydrometer (19 pcs)	1 set
- 11	shrink marker	1 set
- 12	marker ink (red, black, yellow)	3 pcs
- 13	portable sewing machine	1 set

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>
SII - 14	finger sack (10 pcs)	1 set
- 15	pasteboard	1 pc
- 16	bond (2 kinds)	10 pcs
- 17	polisher (CRC - 556)	2 pcs
- 18	universal pH test paper	5 sets
- 19	white forck (L-size)	3 sets
	- do - (M-size)	3 pcs
- 20	ethyl ether (500 ml)	10 bottles
- 21	carbon tetrachloride	10 bottles
- 22	silica gel (500 ml)	5 bottles
- 23	contaminon (1 kg)	5 bottles
- 24	magnetic stirrer (YM-541) with transformer	1 set
- 25	test tube mixer (YM-121) with transformer	1 set
- 26	universal test tube support	1 set
- 27	chuck (S-100)	1 set
	ASTM Standards, Section 7 (Textile)	1 set
	Fairchild's Dictionary of Textiles	1 book
	Reference Book	7 vols

Third year, 1986

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>
SIII- 1	drying oven (YAMATO DG-81 with transformer)	1 unit
- 2	light scope (FF-394)	5 pcs
- 3	sample punch	1 set
- 4	test tube support	5 sets
- 5	rubber stopper	80 pcs
- 6	glass glove for color fastness tester	2 pcs
- 7	undyed white cloth (cotton JIS 1X1 m)	20 pcs
- 8	- do.- (silk)	5 sets
- 9	Di-2 ethylhexylsulfosuccinate sodium salt (500 g)	4 cans
- 10	polyoxyethylene octylphenyl ether	4 bottles

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>
SIII- 11	crook meter (TOYOSEIKI CM01)	1 set
- 12	suction bottle (1,000 ml)	6 pcs
- 13	bamboo ruler (1 m, 1.5 m, 2 pcs each)	4 pcs
	AATCC Technical Manual Vol. 11	1 book
	JIS Standards	4 vols

ANNEX III

List of visited Factories and Institutions

First year, 1984

- Charoon Thai Silk Ltd. Part, Bangkok
(Manufacturer & Exporter of Hand Woven 100% Pure Silk)
- H.M. Factory for Thai Silk, Bangkok
(Manufacturer of Thai Silk)
- Sing Thong Necktie Factory, Bangkok
(Manufacturer and Exporter of neckties, scarves and shawls of
100% Pure Thai Silk)
- Mana Patana Ltd., Bangkok
(Manufacturer & Exporter of Thai Silk Products : neckties,
scarves, cushion covers, etc.)
- Kitchai Silk Co., Ltd., Bangkok
(Manufacturer & Exporter of raw silk : Japanese KIMONO Fabric)

Second year, 1985

- Charoon Thai Silk Ltd. Part, Bangkok
(Manufacturer & Exporter of Hand Woven 100% Pure Silk)
- Ratre Thai Silk, Nakornrajasrma
(Manufacturer of Thai Silk)
- Winner Textile Co., Ltd., Bangkok
(Manufacturer & Exporter of Silk : Japanese Kimono Fabric and
Synthetic Fabric)
- Silco Garments Co., Ltd., Bangkok
(Manufacturer & Exporter of Thai Silk Products : Neckties,
Dresses, Pillow cases)
- Sericultural Research & Training Center, Nakornrajasrma
(Silk Reeling Research & Training Institution)
- JETRO Bangkok Center
- Japan Chamber of Commerce in Bangkok

Third year, 1986

- Charoon Thai Silk Ltd. Part, Bangkok
(Manufacturer & Exporter of Hand Woven 100% Pure Silk)
- Kanita Ltd. Part, Bangkok
(Retail & Export for Garment)
- Textile Industry Division
Department of Industrial Promotion, Ministry of Industry.
- Chemical and Textile Engineering Department
Institute of Technology and Vocational Education.

ANNEX IV

Training Courses Provided in the Field of Standards & Quality Control
(Industrial Products : Textile)

A. Objective of Each Training Course

I. Step I Training Course

1. General Inspection (Quality inspection of silk fabrics)

To enlighten the counterparts on the new methods of silk inspection by introducing the present Japanese inspection methods and machinery.

2. Testing on physical and chemical analysis

1) To introduce the testing methods and machinery used for export silk inspection and textile quality control in Japan.

2) To train the counterparts in basic technique for implementation of the present Thai export standards for silk fabrics.

3) To enlighten the counterparts on basic and preliminary knowledge required by the next trainings, Step II and III courses.

II. Step II Training Course

1. General inspection

To train the counterparts in standard motions, recognition of fabric defects and checkpoints required by the existing Thai export inspection standards for silk fabrics.

2. Testing on physical and chemical analysis

1) To train the counterparts in testing technique required by the test items designated in the Thai export standards.

2) To let the counterparts acquire extensive testing technique for textile quality control.

III. Step III Training Course

1. General inspection

To train the counterparts in appearance inspection technique of Thai silk products, checkpoints and recognition of garment defects.

2. Testing on physical and chemical analysis

1) To train the counterparts in testing techniques other than those conducted in Step II Training Course, which required by textile quality control, and in testing technique of garment performance.

B. Training Item

1. General inspection (Quality inspection of silk fabrics)

- 1) Quality inspection of export silk fabrics in Japan
using color slides
- 2) Introduction of fabric inspection equipment
 - * Specification
 - * Operating method
 - * Maintenance
 - ° Yard setting machine
 - ° Fabric inspection machine
 - ° Lunometer
 - ° Lux meter
- 3) Inspection method
 - * Turning-over method
 - * Inspection by using machine
 - * Measurement of width, length, number of thread and mass of fabric
 - * Defect of fabric
(Yarn, weaving, dyeing and printing defects)
 - * Sampling method for each inspection item

2. Testing on physical and chemical analysis

- 1) Testing methods of textile in Japan
using color slides
- 2) Introduction of testing equipment
 - * Specification
 - * Operating method
 - * Maintenance
 - Torsion scale
 - Rubbing meter
 - Yarn twist tester
 - CIE Standard light source
 - Tensile strength tester
 - Perspiration meter
 - Fadeometer
 - Fabric shrinkage tester
- 3) Introduction of chemicals
 - * Characteristics
 - * Handling
 - * Adjustment
- 4) Analysis on individual items
 - * Identification of a textile fiber
(Silk, wool, cotton, rayon, acetate, polyester, nylon, etc.)
 - Burning test
 - Microscopic test
 - Staining test
 - Solubility test
 - * Textile binary mixture quantitative chemical analysis
(mixture ratio; Silk/cotton, rayon, acetate, polyester, nylon,
etc.)
 - Mechanical method
 - Dissolution method
 - * Yarn size
 - * Number of twist
 - * Mass per unit
 - * Number of thread per unit length

- * Introduction of testing methods of color fastness for the trainees e.g. color fastness to washing, rubbing, perspiration, etc.

II. Step II Training Course

1. General inspection (Quality inspection of silk fabrics)

- (1) Explanation of defect and defects II :
 - 1) Fabric defects made in weaving process
 - 2) Fabric defects made in degumming process
- (2) Training of standard inspection methods of turning-over inspection and mechanical inspection
- (3) Training trainees to develop selection ability of qualified fabrics in inspection practices

2. Testing : physical and chemical analysis of fabrics

- (1) Textile binary mixture quantitative chemical analysis :
 - Dissolution method;
 - two-fiber mixtures and three-fiber mixtures
- (2) Color fastness tests :
 - ° color fastness to washing
 - ° color fastness to rubbing
 - ° color fastness to perspiration
 - ° color fastness to carbon arc lamp light
- (3) Physical tests of fabrics
 - ° number of twist
 - ° shrinkage of fabrics
 - ° tensile strength
 - ° tearing strength

III. Step III Training Course

1. General inspection (Quality inspection of silk products)

- (1) Defects of products
- (2) Inspection method

2. Testing : physical and chemical analysis

- (1) Color fastness test to dry cleaning
- (2) Physical Test
 - Yarn slippage resistance
 - Seam strength

C. State of Training Implementation

Cooperation year		First year (Apr. 27, 1984 - Jul. 26, 1984)	Second year (Apr. 21, 1985- Jul. 19, 1985)	Third year (Aug. 1, 1986 - Nov. 15, 1986)	
Training Course etc.					
Step I		Opened	Opened (Review)	Opened (Review)	
Step II		—	Opened	Opened (Review)	
Step III		—	—	Opened	
Training hours (hrs.)	1	Total 338.0	143.0	156.0	39.0
	2	Total 299.0	143.0	—	156.0
	3	Total 513.5	143.0	214.5	156.0

(Note) Counterparts ;

1. Mr. Amarin Kongpun
2. Mrs. Porntip Sritalanont
3. Mr. Pichet Intarapanich

ANNEX V.

Workshop Program and List of Participants

1. Workshop I, 19 to 20 July, 1985

(1) Program

	AM (9:30 - 12:00)	PM (1:30 - 4:30)
Thur. 19	<p>Opening Ceremony</p> <p>Testing on physical and chemical analysis (Part 1)</p> <ol style="list-style-type: none"> 1. Testing methods of textile in Japan (using slides) 2. Introduction of testing equipment <ol style="list-style-type: none"> (1) Torsion scale (2) Rubbing meter (3) Yarn twist tester (4) CIE Standard light source (5) Tensile strength tester (6) Perspiration meter (7) Fadeometer (8) Fabric shrinkage tester 3. Introduction of chemicals 	<ol style="list-style-type: none"> 4. Fiber identification (silk, wool, cotton, rayon, polyester, etc.) <ol style="list-style-type: none"> (1) Burning test (2) Microscopic test (3) Staining test (4) Solubility test 5. Mixture ratio (silk/polyester mixtures Thai Juri) <ol style="list-style-type: none"> (1) Mechanical method (2) Dissolution method
Fri. 20	<p>General inspection (Quality inspection of silk fabrics)</p> <ol style="list-style-type: none"> 1. Quality inspection of export silk fabrics in Japan (using slides) 2. Introduction of fabric inspection equipment <ol style="list-style-type: none"> (1) Lux meter (2) Yard setting machine (3) Fabric inspection machine (4) Lunometer 3. Weaving defects <ol style="list-style-type: none"> (1) Defects in the warp direction (2) Defects in the filling direction (3) Other defects 	<p>Testing on physical and chemical analysis (Part 2)</p> <ol style="list-style-type: none"> 1. Test method of yarn size 2. Test method of mass per unit area 3. Introduction of color fastness test

(2) Lecture by following trainers

Mr. Amarin Kongpun

Mrs. Porntip Sritalanont

Mr. Pichet Intarapanich

(3) Advisor to the workshop

Mr. Tsunehide MIKI

Mr. Kazumi SAGISAKA

(4) List of participants

Name	Position
Mrs. Pakaiporn Ritthironk	Commodity Standard Officer 5
Mr. Sanit Setachit	Commodity Standard Officer 4
Mr. Suchart Jariyathiravech	Commodity Standard Officer 4
Mrs. Sasitorn Kulmoranon	Commodity Standard Officer 4
Mrs. Shanaisri Arkavakom	Commodity Standard Officer 4
Mrs. Aree Inwarapatna	Commodity Standard Officer 4
Mr. Pirat Potikanok	Commodity Standard Officer 4
Mr. Cholayuth Chalapagdee	Commodity Standard Officer 4
Ms. Kaewta Kaewngam	Commodity Standard Officer 3
Ms. Suratana Chiratraipop	Commodity Standard Officer 3
Mrs. Srichant Roongchang	Commodity Standard Officer 2

2. Workshop II, 13 to 16 October, 1986

(1) Program

	AM (9:30 - 12:00)	PM (1:30 - 4:30)
Mon. 13	Opening Ceremony Briefing of the training program Identification of Textile Fibers	Identification of Textile Fibers ◦ Burning Test ◦ Microscopic Test ◦ Staining Test ◦ Solubility Test
Tue. 14	Quantitative Analysis of Fiber Mixture Ratio for Thai Juri ◦ Mechanical Method ◦ Dissolution Method	
Wed. 15	- ditto -	Physical Test for Thai Silk ◦ Yarn Fineness ◦ Density for Fabric
Thur. 16	General Inspection for Thai Silk and Silk Products ◦ How to inspect, checking point ◦ Weaving Defects ◦ Defects of Garment	Summary

(2) Lecture by following intern trainers

Mr. Amarin Kongpun

Mrs. Porntip Sritalanont

Mr. Pichet Intarapanich

(3) Advisor to the workshop

Mr. Tsunehide MIKI

Mr. Ikuo TSUKAGOSHI

(4) List of participants

Name	Position	Age	Working Years
Mr. Piyachart Supanagula	CSEO 6	36	13 Years
Mr. Chaisri Lamyai	TO 5	45	20 Years
Mrs. Apirde Panthpalin	CSO 4	34	12 Years
Mr. Pichest Leelavachiropast	SC 3	26	2 Months
Miss Thongsuk Sriyouopom	SC 3	24	2 Months
Miss Pojana Traipuech	SC 3	23	2 Months
Miss Wonpen Nimsumpao	SC 3	26	2 Months
Miss Orapin Charoungkaewdoungee	TO 2	25	2 Years
Miss Duanpen Trithum	GAO 1	23	1 Year

CSEO = Commodity Standards Executive Officer

TO = Trade Officer

CSO = Commodity Standards Officer

SC = Scientist

GAO = General Affairs Officer

Maintenance & Checking of Equipment

Standards and Quality Control
(Industrial Products)

Laundry Tester	Operate twice a month Follow the "Maintenance Operation" manual
Yard Setting Machine:	Clean the needles with oil-applied cloth to prevent rust from generating once a month
Standard UV long-life fade meter	Drain water completely after use
Fabric Shrinkage Tester	Drain water completely after use

Maintenance Operation Manual of the Laundry Tester;

It is recommended to operate the Laundry Tester regularly, twice a month, in order to prevent rust from generating and keep the tester in good condition.

Maintenance Operation

- 1. Close the drain cock*
- 2. Open the water supply cock and supply water into the main tub until it reaches about 4 to 5 cm. above the water supply hole on the beaker pre-heating tub (upto the marked line). "The water must be below the rotor axle". Close the lids of both tubs.*
- 3. Plug in the electric cord. Turn on the power switch and set the water temperature dial at 40°C.*
- 4. Depress the heater switch and then the quick heater switch.*

5. When the water temperature reaches the set value, depress the pump switch to let the water in the main tub circulate into the beaker pre-heating tub.
6. Set the operation time at 30 minutes and depress the motor switch.
"Make sure that the lids of the main tub and the beaker pre-heating tub are closed."
"During the operation, open the right side cover for better cooling of the motor and the pump."
7. When the buzzer sounds and the machine stops, turn off the button switches and the power switch.
Unplug the cord.
8. Open the drain cock to let the water out.
9. Open the lids of the main tub and the beaker pre-heating tub for complete drying.

Note : Water temperature and operation time can be set at the different values as the case may be.

ANNEX VII

PHASE I TRAINING COURSE CURRICULUM

Objective of the course	Training item	Objective of each item	Textbook	Relevant references	Testing apparatus	Time needed (hours)		
To train OCS officials in improving their techniques of inspection and testing required by more effective implementation of the existing Thai export standards for silk fabrics.	T E S T	Identification of Textile Fibers ◦ Burning Test ◦ Microscopic Test ◦ Staining Test ◦ Solubility Test	Phase I Training Course Textbook	FIBER (JICA) FKOF (JICA)	Gas burner Alcohol lamp SI - 8 Microscope D - 17 Hot plate D - 4 Draft Chamber D - 6	5		
		I N G		Fiber Mixture Ratio for Thai Juri ◦ Machanic Method ◦ Dissolution Method	To acquire quantitative analyzing techniques of Thai Juri mixture ratio.	FKOF (JICA)	Analytical balance D - 1 Hot air oven D - 5 Shaking machine D - 7a Water bath D - 12 Handy aspirator D - 15b Standard Hydrometer SII-10	10
				Physical Test for Thai Silk Yarn Fineness (Size)	To acquire measuring techniques of warp yarn size of Thai Silk fabrics designated in the Thai export standard.	FIBER (JICA)	Analytical balance D - 1 Torsion scale D - 42	2
				Physical Test for Thai Silk Density of Fabrics	To acquire measuring techniques of warp yarn density of Thai Silk fabrics designated in the Thai export standard.		Luno meter SI-13 Textile analysis glass SI-i	2
	I N S P E C T I O N	Quality Inspection of Silk Fabrics		To acquire standard appearance inspection technique of silk fabrics.	-Color slide- [Quality Inspection of Silk]	Fabric inspection machine D - 51 Yard setter D - 50 Luxe meter D - 52	2	
		Weaving Defects		To learn knowledges of fabric defects required by appearance inspection of Thai Silk and Thai Juri fabrics.	The said textbook		2	
		Clothes Part and Checkpoint		To learn knowledges of clothes part and their checkpoints needed for appearance inspection of Thai Silk Products			2	
		Defects of Garment		To learn knowledges of defect of garments required by appearance inspection of Thai Silk Products			2	
						Total	27	

*NOTE : FKOF means "Fundamental knowledge on Fiber ", a textbook prepared by JICA

JICA