

ANNEX 8

Japanese Contributions

- (1) Dispatch of Japanese Experts**
- (2) Training of Malaysian Personnel in Japan**
- (3) Provision of Equipment**
- (4) Local Running Cost and Others**

Japanese Contributions

(1) Dispatch of Japanese Experts

	Long term	Short Term	Total
Team Leader	3	1	4
Virology	3 (1)	3	6 (1)
Bacteriology	0 (1)	7	7 (1)
Pathology	0 (1)	5	5 (1)
Parasitology	0	4	4
Epidemiology	0 (1)	1	1 (1)
SPF & Maint.	0	5	5
Coordinator	3	0	3
Other	0	2	2
Total	9 (4)	28	37 (4)

():Leader serve concurrently

Japanese Experts Dispatched.

Name	Subject specialized	Period dispatched
Dr. Shigemi Shyoya	Research Plan	21/10/' 85-4/12/' 85
Dr. Toshio Fukuroji	Poultry Health	21/10/' 85-4/12/' 85
*Dr. Shigemi Shyoya	Leader & Pathology	15/10/' 86-14/4/' 89
Dr. Muneo Ogata	Leader & Epidemiology	11/9/' 89-10/12/' 89
*Dr. Masateru Chikatsune	Leader & Virology	26/6/' 90-25/6/' 91
*Dr. Chikara Kuniyasu	Leader & Bacteriology	25/6/' 91-16/4/' 93
Dr. Noboru Yuasa	Virology	13/1/' 87-13/3/' 87
*Dr. Masaya Sakata	Virology	3/3' 87-25/3/' 88
*Dr. Hiroaki Ota	Virology	11/4/' 88-10/4/' 90
*Dr. Sumio Ikeda	Virology	18/8/' 88-17/8/' 90
Dr. Kazuhiko Togawa	Virology	23/5/' 90-23/8/' 90
Dr. Hiroshi Hihara	Virology	13/12/' 91-10/3/' 92
Dr. Isao Nonomura	Bacteriology	2/7/' 87-29/9' 87
Dr. Yoshikazu Iritani	Bacteriology	1/9' 88-29/11/' 88
Dr. Koshi Yamamoto	Bacteriology	25/9' 88-23/12/' 88
Dr. Masaharu Kanameda	Bacteriology	8/8/' 90-31/12/' 90
Dr. Chikara Kuniyasu	Bacteriology	26/2/' 91-23/3/' 91
Dr. Masashi Eguchi	Bacteriology	13/12' 91-12/3/' 92
Dr. Masato Kishima	Bacteriology	16/12/' 92-7/3/' 93
Mr. Masaru Kobayashi	Pathology (EM)	22/2/' 88-30/4/' 88
Dr. Makoto Haritani	Pathology (EM)	25/10/' 89-20/1/' 90
Dr. Toshiaki Taniguchi	Pathology	26/9/' 90-25/12/' 90
Dr. Toshiaki Taniguchi	Pathology	13/12/' 91-10/3/' 92
Dr. Minoru Narita	Pathology	15/2/' 93-16/4/' 93
Dr. Shigenori Hagiwara	Parasitology	4/4/' 88-3/7/' 88
Dr. Kameo Shimura	Parasitology	1/9/' 88-29/11/' 88
Dr. Tamio Inamoto	Parasitology	13/12/' 91-12/3/' 92
Dr. Naotoshi Tsuji	Parasitology	16/12/' 92-7/3/' 93
Dr. Tomoyuki Abe	Epidemiology	8/9/' 97-8/12/' 87
Mr. Shigeru Karasawa	SPF Maintenance	1/9/' 88-30/9/' 88
Dr. Hiroshi Hihara	SPF Maintenance	1/9/' 88-29/11/' 88
Mr. Shigeru Karasawa	SPF Maintenance	11/9/' 89-9/10/89
Mr. Kaoru Sukegawa	Equipment Maintenance	3/8/' 92-20/3/' 92
Mr. Hidetoshi Ito	Equipment Maintenance	23/7/' 88-31/7/' 88
*Mr. Takashi Kusano	Coordinator	14/8/' 86-13/10/' 86
*Mr. Ichiro Mukai	Coordinator	26/9/' 88-18/4/' 91
*Mr. Shigeyuki Oya	Coordinator	11/4/' 91-30/4/' 93

*Long term experts

(2) Training of Malaysia Personnel in Japan

Subject	No. of Counterpart
Manatement	7
Virology	6
Bacteriology	6
Parasitology	3
Pathology	4
Epidemiology	1
SPF Maintenance	2
Total	29

Counterpart Training in Japan

Name	Subject specialized	Period dispatched
Dr. Gan Chee Hiong	Management	15/1/86-6/2/86
Dr. Dato Mustaffa Babjee	Management	3/7/88-7/7/88
Dr. Hadi bin Dato Hashim	Management	6/11/89-19/11/89
Mr. Yahya muhamad	Management	11/3/90-26/3/90
Dr. Anwar Hassan	Management	2/2/92-15/2/92
Dr. Kardin bin Shukor	Management	5/11/91-17/11/91
Dr. Yusoff bin Mohd. Noor	Management	14/12/92- /12/92
Dr. Chai Kim Kheong	Virology	24/3/87-29/9/87
Mdm Cheah Ngan Yoke	Virology	24/7/89-23/12/89
Dr. Wan Mohd. Kamil	Virology	25/3/91-19/9/91
Mr. Lim Kean Teik	Virology	30/3/92-2/7/92
Mdm Ong Geok Huai	Virology	6/1/92-29/3/92
Mdm Lim Siew Sam	Virology	27/9/92-27/11/92
Ms Zaini bt Mohd. Zain	Bacteriology	12/1/87-30/5/87
Ms Siti Zaleha ABD Talib	Bacteriology	21/9/87-20/12/87
Mdm Tan Lin Jee	Bacteriology	9/9/90-9/12/90
Mdm Siti Hajah bte Ibrahim	Bacteriology	7/10/92-8/12/92
Mr. Buthtaman bin Yusof	Bacteriology	7/10/92-8/12/92
Mr. Karuppaiya a/l Annamalai	Bact. & Serology	7/10/92-8/12/92
Mr. Parameswaran	Parasitology	12/1/87-18/7/87
Dr. Rahmat bin Sheriff	Parasitology	13/3/89-27/9/89
Dr. Chandrawathani	Parasitology	7/10/92-8/12/92
Panchadcharam		
Mr. Yap Hon Choong	Pathology (EM)	20/9/87-1/12/87
Dr. Mahani bt. Abd Hamid	Pathology	13/3/89-27/9/89
Mr. Ganesan Sethalingam	Pathology	18/3/90-8/8/90
Mdm Zuraidah bt. Ahmad	Pathology	6/1/92-29/3/92
Mdm Tan Choong Lian	Epidemiology	25/3/91-23/6/91
Mr. Lip Kim Lock	SPF Maintenance	5/12/87-31/5/88
Mr. Peter Mangalam Dus	SPF Maintenance	25/3/91-11/9/91

THE EQUIPMENTS LIST in 1991

VIROLOGY	1. CARBON DIOXIDE GAS TANK	853.00	(M\$)
	2. LABORATORY STORAGE SHELF	4,510.00	
	3. FACE MASK WITH ACCESSORIES	1,212.00	
	4. NALGE FILTERS HOLDER & RECEIVER	7,616.00	*
	5. SAFETY BUNSEN BURNER	4,800.00	
	6. HITACHI REFRIDGERATOR HIGH SPEED CENTRIFUGE	42,598.00	
	<u>TOTAL</u>	<u>61,589.00</u>	
PARASITOLOGY	1. VACUUM CONCENTRATOR	20,886.00	
	2. ELECTROPHORESIS AND BOLTTING SETS	24,175.00	
	3. GEL DRYER	4,022.00	
	4. SEMI MICRO ANALYTICAL BALANCE	5,690.00	
	5. LIQUID NITROGEN SET	5,585.00	
	6. ROTOMIX CROTATION AND STAKINGS	3,618.00	
	7. LABORATORY JACK	673.00	
	<u>TOTAL</u>	<u>64,649.00</u>	
PATHOLOGY	1. VORTEXMIXER	1,133.00	
	2. REFRIGIRATOR, NORMAL 4C (2)	3,732.00	
	3. HAIR DRYER	74.00	
	4. WATER BATHS FOR NISTO SECTIONS	1,390.00	
	5. HOT PLATE STIRRER	852.00	
	6. FUME HOOD	9,800.00	
	7. WAX BATH BEAKERS	4,510.00	
	8. LAB BENCH "DALTON"	1,538.00	
	9. INCUBATOR	2,300.00	
	10. CUPBOARD FOR EM SPECIMENTS	1,900.00	
	11. VACUUM CLEANER	313.00	
	<u>TOTAL</u>	<u>27,542.00</u>	
BACTERIOLOGY	1. PCR EQUIPMENT	14,750.00	
	2. CHOREMATOGRAPHY COLOUMNS	580.00	*
	3. DNA ELECTROPHORES SYSTEM	22,565.00	*
	4. BELLY DANCER SHAKER	2,850.00	*
	5. IMMUNOVIEWER	315.00	*
	6. VACUUM DESICCATOR	165.00	*
	<u>TOTAL</u>	<u>41,225.00</u>	
ADMINISTRATION	1. -80C FREZZER	23,208.00	
	2. PHOTOCOPY MACHINE	22,600.00	
	3. PC COMPLETE WITH PRINTERS (2)	18,145.00	
	4. LASER COLOR PRINTER	7,687.00	
	<u>TOTAL</u>	<u>71,640.00</u>	
	(1M\$=49.1159 JY 13,096,509 円)	<u>GRAND TOTAL</u>	<u>266,645.00</u>

* They will be delivered soon

THE EQUIPMENTS LIST in 1992

VIROLOGY	Price	Company (M\$)
1 . MICROCENTRIFUGE WITH ACCESSORIES	14,725.00	SARI ALAT
2 . PAGE PROTEIN ELUTER	5,895.00	FILTARITE
PARASITOLOGY		
1 . ULTRA SONICATOR	13,035.00	TABUNG HAJI
2 . FRACTION COLLECTOR	25,987.00	MICROSTATE
PATHOLOGY		
1 . ULTRATHIN EM SPECIMEN TRIMMER	50,000.00	HISTOCENTER
2 . ROTARY MICROTOME	38,000.00	HISTOCENTER
BACTERIOLOGY		
1 . ROTOFOR (for isoelectric focusing of proteins)	30,500.00	MICROSTATE
2 . POLAROID CAMERA	595.00	FILTARITE
SPF		
1 . PELLETING MACHINE	50,427.40	QUICKLAB

Total 229,164.40 M\$

(1M\$ = 50.2613 円) 11,518,100 Yen

JAPANESE CONTRIBUTION TO THE PURCHASE OF EQUIPMENT

Equipment Provision under T/C

1000 yen

YEAR	AMOUNT
86/87	12,878
87/88	123,770
88/89	36,698
89/90	25,214
90/91	8,000
91/92	13,096
92/93	11,518
TOTAL	231,174

EQUIPMENT PROVIDED

LEGEND :	ITEM NO. / SOURCE OF FUND	USAGE		Supplier	Unit Price	Funding	Quantity	Delivery	APORTC	Usage
		Item	Room							
	GAL : Grant Aid Phase 1									
	GAL : Grant Aid Phase 2									
	TC 1 : Technical Cooperationist Request									
	TC 2 : Technical Cooperationist Request									
	TC 3 : Technical Cooperationist Request									
	TC 4 : Technical Cooperationist Request									
	TC 5 : Technical Cooperationist Request									
	TC 6 : Technical Cooperationist Request									
	TC 7 : Technical Cooperationist Request									
	TC 8 : Technical Cooperationist Request									
	TC 9 : Technical Cooperationist Request									
	GAS : JICA Team Fund									
	GAT : JICA Team Fund									
Station	Item	Model	JICA Item No	Supplier	Unit Price	Funding	Quantity	Delivery	APORTC	Usage
Administration	VTR-Monitor TV	NEC Corp.	SA1 1	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AM 271_2	C
Administration-Preparation	Tape Recorder	Hitachi	SA1 6	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 13	D
Bacteriology-Clean Room	Laminar Flow	Sartorius	SA1 13	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AB 31	B
Bacteriology-Clean Room	Side Table	Sartorius	SA1 15	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AB 4/6_7	A
Bacteriology-Clean Room	Sink	Sartorius	SA1 11	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AB 5/3	A
Bacteriology-Clean Room	Sink	Sartorius	SA1 11	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AB 5/4	A
Bacteriology-Clean Room	Side Table	Sartorius	SA1 6	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AB 4/5	A
Bacteriology-Laboratory	Center Table	Sartorius	SA1 7	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AB 1/1_2	A
Bacteriology-Laboratory	Instrument Cabinet	Sartorius	SA1 10	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AB 2/1_2	A
Bacteriology-Laboratory	Side Table	Sartorius	SA1 6	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AB 4/1_2	A
Bacteriology-Laboratory	Side Table	Sartorius	SA1 15	KNC	GRANT AID	GA Phase 1	3-3	33/01/19	AB 4/5_6	A
Bacteriology-Laboratory	Sink	Sartorius	SA1 11	KNC	GRANT AID	GA Phase 1	4-4	33/01/19	AB 5/1_2	A
Bacteriology-Laboratory	Storage Cabinet	Sartorius	SA1 9	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AB 5/1_2	A
Bacteriology-Washing	Metal Wire Cage	Ishihara	SA1 39	KNC	GRANT AID	GA Phase 1	5-5	33/01/19	AM 3/1	A
Bacteriology-Washing	Autoclave	Aashi Metal	SA1 36	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 1/1	A
Bacteriology-Washing	Carrier	Ishihara	SA1 36	KNC	GRANT AID	GA Phase 1	3-1	33/01/19	AM 2/1	A
Bacteriology-Washing	Digitalizer	Topcon	SA1 33	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 3/1	A
Bacteriology-Washing	Hot Air Sterilizer	Sakura	SA1 30	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AM 4/1_2	A
Bacteriology-Washing	Laundry Machine	Mitsubishi	SA1 35	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 5/1	A
Bacteriology-Washing	Mechanical Centrifuge	Sakura	SA1 33	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 7/1	A
Bacteriology-Washing	Medical Instrument	Telco	SA1 36	KNC	GRANT AID	GA Phase 1	3-3	33/01/19	AM 3/1_2_3	A
Bacteriology-Washing	Ultra Sonic Cleaner	Sakura	SA1 31	KNC	GRANT AID	GA Phase 1	5-5	33/01/19	AM 1/1	A
Bacteriology-Washing	Water Still	Toyoko	SA1 34	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 12/1	A
Bacteriology-Washing	Working Table	Sartorius	SA1 15	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 2/1	A
Bacteriology-Washing	Side Table	Sartorius	SA1 15	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 3/2	A
Parasitology-Clean Room	Sink	Sartorius	SA1 11	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 1/1/2	A
Parasitology-Clean Room	Sink	Sartorius	SA1 11	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 1/1/4	A
Parasitology-Clean Room	Center Table	Sartorius	SA1 7	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AM 1/1_2	A
Parasitology-Clean Room	Instrument Cabinet	Sartorius	SA1 10	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AM 1/1_2	A
Parasitology-Laboratory	Laminar Flow	Sartorius	SA1 12	KNC	GRANT AID	GA Phase 1	4-4	33/01/19	AM 10/1	A
Parasitology-Laboratory	Side Table	Sartorius	SA1 3	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AM 2/1_2	A
Parasitology-Laboratory	Sink	Sartorius	SA1 11	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AM 11/1_2	A
Parasitology-Laboratory	Storage Cabinet	Sartorius	SA1 9	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	AM 7/1_2	A
Parasitology-Laboratory	Ion Splitter	Hitachi Ltd	SA1 43	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	HE4	B
Parasitology-Laboratory	Critical Point	Hitachi Ltd	SA1 42	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	HE7	B
Parasitology-Laboratory	Glass Knife	Hitachi Product	SA1 44	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	HE6	B
Parasitology-Laboratory	Staining Electrocouse	Hitachi Ltd	SA1 40	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	HE2	B
Parasitology-Laboratory	Transmission Electro	Hitachi Ltd	SA1 41	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	HE1	B
Parasitology-Laboratory	Ultra Microtome	Hitachi Product	SA1 45	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	HE5	B
Parasitology-Laboratory	Vacuum Evaporator	Hitachi Ltd	SA1 46	KNC	GRANT AID	GA Phase 1	2-2	33/01/19	HE3	B
Parasitology-Laboratory	Autopsy Instrument	Fujinara	SA1 16	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 10/1_2	A
Parasitology-Laboratory	Autopsy Table	Sartorius	SA1 16	KNC	GRANT AID	GA Phase 1	1-1	33/01/19	AM 9/1	A

Pathology-Laboratory	Cartier Table	Sam-Ei	FG45-DL	GA 1	7	KNC	GRANT AID/GA Phase 1	2-2	8301/19	WHP 121, 2	A
Pathology-Laboratory	Centrifuge	Kubota	KH-1200	GA 1	74	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 121	A
Pathology-Laboratory	Dissection Sorex	Clea-Jap	CL-411D	GA 1	32	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 121	D
Pathology-Laboratory	Instrument Cabinet	Sam-Ei	BF-IV	GA 1	10	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 51	A
Pathology-Laboratory	Instrument Cabinet	Sam-Ei	BF-IV	GA 1	10	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 52	A
Pathology-Laboratory	Sterilizer	Sam-Ei	ASV 300	GA 1	23	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 191	C
Pathology-Laboratory	Draft Chamber	Sam-Ei	DE-SP	GA 1	12	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 61	A
Pathology-Laboratory	Cabinet	Tomo	ST1012	GA 1	26	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 111	A
Pathology-Laboratory	Outlet	mkcm	ZF-21	GA 1	16	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 151	A
Pathology-Laboratory	Copy Table	Sam-Ei	OMP-120	GA 1	21	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 151	A
Pathology-Laboratory	Paucity Scale	Fujifilm	-	GA 1	24	KNC	GRANT AID/GA Phase 1	12-2	8301/19	WHP 201	B
Pathology-Laboratory	Shadowless Light	Nippon	M-155	GA 1	20	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 131	B
Pathology-Laboratory	Side Table	Sam-Ei	D-F-IV	GA 1	6	KNC	GRANT AID/GA Phase 1	14-4	8301/19	WHP 21, 2	A
Pathology-Laboratory	Side Table	Sam-Ei	D-F-IV	GA 1	6	KNC	GRANT AID/GA Phase 1	12-2	8301/19	WHP 35, 6	A
Pathology-Laboratory	Side Table	Sam-Ei	D-F-IV	GA 1	14	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 37	A
Pathology-Laboratory	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 71	A
Pathology-Laboratory	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 72	A
Pathology-Laboratory	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 73	A
Pathology-Laboratory	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 74	A
Pathology-Laboratory	Storage Cabinet	Sam-Ei	CA-IV	GA 1	9	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 67	A
Pathology-Laboratory	Storage Cabinet	Sam-Ei	CA-IV	GA 1	9	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 62	A
Pathology-Laboratory	Storage Cabinet	Sam-Ei	CA-IV	GA 1	9	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 43	A
Pathology-Laboratory	Working Table	Nippon	UK 2001	GA 1	25	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WHP 21	D
Training-Laboratory	Microscope TV	Sam-Ei	GAG-IV	GA 1	53	KNC	GRANT AID/GA Phase 1	2-2	8301/19	WTD 8	D
Training-Laboratory	Instrument Table	Sam-Ei	C-4J	GA 1	52	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WTD 5	D
Training-Preparation	Instrument Cabinet	Sam-Ei	BF-IV	GA 1	10	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WTD 11	D
Training-Preparation	Storage Cabinet	Sam-Ei	CA-IV	GA 1	9	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WTD 12	D
Micrology-Clean Room	Side Table	Sam-Ei	S-WT-H	GA 1	15	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WV 201	A
Micrology-Clean Room	Side Table	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WV 202	A
Micrology-Clean Room	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	-	A
Micrology-Common Equip	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	-	A
Micrology-Common Equip	Working Table	Sam-Ei	UTB-IV	GA 1	37	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WC 61	A
Micrology-Freeze Dry	Compressor	Hilsch	-	GA 1	29	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WF 11	A
Micrology-Freeze Dry	Freezer Dryer	Labconco	FD-10	GA 1	27	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WF 31	A
Micrology-Freeze Dry	Spalling Burner	Labconco	D-F-IV	GA 1	28	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WF 41	C
Micrology-Freeze Dry	Working Table	Sam-Ei	UTB-IV	GA 1	37	KNC	GRANT AID/GA Phase 1	2-2	8301/19	WF 21, 2	A
Micrology-Insulator	Side Table	Sam-Ei	D-F-IV	GA 1	8	KNC	GRANT AID/GA Phase 1	1-1	8301/19	W1.1	A
Micrology-Laboratory	Center table	Sam-Ei	FG45-DL	GA 1	7	KNC	GRANT AID/GA Phase 1	2-2	8301/19	WV 203, 4	A
Micrology-Laboratory	Instrument Cabinet	Sam-Ei	BF-IV	GA 1	10	KNC	GRANT AID/GA Phase 1	2-2	8301/19	WV 231, 2	A
Micrology-Laboratory	Side Table	Sam-Ei	D-F-IV	GA 1	8	KNC	GRANT AID/GA Phase 1	4-4	8301/19	WV 205, 3	A
Micrology-Laboratory	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	2-2	8301/19	-	A
Micrology-Laboratory	Storage Cabinet	Sam-Ei	CA-IV	GA 1	9	KNC	GRANT AID/GA Phase 1	2-2	8301/19	WV 233, 4	A
Micrology-Precision	Center Table	Sam-Ei	FG45-DL	GA 1	7	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WV 71	A
Micrology-Precision	Instrument Cabinet	Sam-Ei	BF-IV	GA 1	10	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WV 81	A
Micrology-Precision	Side Table	Sam-Ei	D-F-IV	GA 1	8	KNC	GRANT AID/GA Phase 1	2-2	8301/19	WV 72, 3	A
Micrology-Precision	Shk	Sam-Ei	A-IV	GA 1	11	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WV 82	A
Micrology-Precision	Storage Cabinet	Sam-Ei	CA-IV	GA 1	9	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WV 82	A
Micrology-Ultra Centrifuge	Instrument Cabinet	Sam-Ei	BF-IV	GA 1	10	KNC	GRANT AID/GA Phase 1	1-1	8301/19	WV 41	A
Micrology-Ultra Centrifuge	Instrument Cabinet	Sam-Ei	BF-IV	GA 1	10	KNC	GRANT AID/GA Phase 1	1-1	8301/19	-	A
Micrology-Ultra Centrifuge	Side Table	Sam-Ei	D-F-IV	GA 1	8	KNC	GRANT AID/GA Phase 1	1-1	8301/19	-	A

EQUIPMENT PROVIDED

LEGEND :	ITEM NO. / SOURCE OF FUND	Supplier	Unit Price	Funding Batch	Quantity	Delivery Date	APDRFC No	Usage Rate	Maintenance Rate				
	USA GE												
	A. Used More than Once a week												
	B. Used More than Once A Month												
	C. Used More than Once in 6 Months												
	D. Used Less than Once in 6 Months												
	MAINTENANCE												
	A. Good condition												
	B. Solvable problem												
	C. Unsolvable problem												
	D. Disposable												
	GG: JICA Team Fund												
	GG: JICA Team Fund												
Installation Section	Room	Item	Maker	Model	JICA Item No	Supplier	Unit Price	Funding Batch	Quantity	Delivery Date	APDRFC No	Usage Rate	Maintenance Rate
Administration-Conference		Overhead Projector	ELMO	HB300	TC2 105	HISCO	\$1,333.00	TCB 622	1-2	33/01/00	K/A 1	B	A
Administration-Conference		Media board	Sharp	VB-500	TC2 97	KUAN	\$7,330.00	TCB 631	1	33/07/13		B	A
Administration-Director		Office safe	D.F.R.S	MC-550	TC2 104	KUAN	4,680.00	TCB 622	1-2	33/01/22	K/A 6	A	A
Administration-Entrance Hall		Gravel	Tai Hong	3x5-6/4	16 -1	Tai Hong	\$300.00	Project Team	1-1	37/03/31		A	A
Administration-Garage		Leop	Isuzu	TROOPER	TC1 2	ISUZU	\$37,113.00	TCB 611	2-2	37/03/31	K/A 31, 2	A	A
Administration-Garage		Van	Nissan	C-20	TC1 1	TAN CHONG	\$18,418.37	TCB 611	1-1	37/03/31	K/A 4	A	A
Administration-Office		Photocopier	MINOLTA	EP-4702	TC2 3	CITY	\$16,300.00	TCB 622	1-1	33/07/13	K/A 7	C	A
Administration-Office		Minibus	TOYOTA	DUALISER	TC2 59	TAMAC	\$59,500.00	TCB 622	1-1	33/07/13	K/A 5	A	A
Administration-Office		Typewriter, electric	CANON	AP-610	TC2 101	CANON	\$2,052.57	TCB 622	2-3	37/10/12	K/A 81, 2	A	A
Administration-Office		Paper shredder	AMICA	C-2230A	TC2 103	KUAN	\$1,445.00	TCB 631	1	33/07/13		A	C
Administration-Office	91	Photocopier/Multifunction	MINOLTA	EP-5400	TC3 1	MINOLTA	\$22,600.00	TCB 631	1	32/04/10	K/A 023	A	A
Administration-Office	91	PC Complete with printer	DATAMINI	386 DX-33	TC3 2	TE COMPUTER	\$18,145.00	TCB 31	1	32/05/13	K/A 024	A	A
Administration-Office	91	Laser Color Printer (Print Jet)	HEWLETT	PAINT-LET	TC3 3	TE COMPUTER	\$7,687.00	TCB 31	1	32/05/25	K/A 025	A	A
Administration-Forestology	91	80 C Freezer	HETCFRIG	CL 410	TC3 4	TRANS TECHNIC	\$23,208.00	TCB 31	1	32/08/13	AP 631	A	A
Administration-Storage		Power Generator	Yanmar	YDGA500	TC-4201	POHHA	\$5,950.00	TCB 631	1-1	37/03/23	K/A 14	C	A
Bacteriology-Experiment		Autoclave	Galienka	TCJ-410	TC3 36	ANTAH	\$110.00	TCB 631	2	33/03/23		C	A
Bacteriology-Experiment		Galienka	TCJ-410	TC3 36	TC3 36	ANTAH	\$110.00	TCB 631	2	33/03/23		C	A
Bacteriology-Experiment		Galienka	TCJ-410	TC3 36	TC3 36	ANTAH	\$110.00	TCB 631	2	33/03/23		C	A
Bacteriology-Experiment		Gas pack culture	Oxoid	DNM-335	TC2 58	GLAXOLAB	\$2,268.00	TCB 631	1	33/12/05	AB 391	A	A
Bacteriology-Experiment		Microdilutors	Tierck	77-440	TC2 64	GLAXOLAB	\$630.00	TCB 631	2	33/12/05	AB 371, 2	B	A
Bacteriology-Experiment		Refrigerator	Sanyo	SR-303T	TC2 26	GLAXOLAB	\$3,224.00	TCB 631	1	33/05/22	AB 351	A	A
Bacteriology-Experiment		Steriliser	Galienka	SVF-340	TC2 47	GLAXOLAB	\$1,863.00	TCB 631	1	33/05/22	AB 162	A	A
Bacteriology-Experiment		Vortex mixer	Thermo	37600	TC2 31	DELMA	\$290.00	TCB 631	1	33/07/22	AB 121	A	A
Bacteriology-Experiment		Autoclave	TCMY	SS-240	TC2 32	FILCO	\$5,715.00	TCB 631	1-2	33/11/22	AB 331	A	A
Bacteriology-Laboratory		Cooling Centrifuge	HITACHI	CFE82	TC2 4	FILCO	\$5,715.00	TCB 631	1-2	33/11/22	AB 331	A	A
Bacteriology-Laboratory		Deep freezer	SHIMO	MDF-053	TC2 2	FILCO	\$3,912.45	TCB 622	1-4	33/01/23	AB 71	A	A
Bacteriology-Laboratory		Dessicator	TOCHI	1-40-0	TC2 23	HISCO	\$5,655.00	TCB 631	1-6	33/03/01	AB 81	A	A
Bacteriology-Laboratory		Digital Balance	LEEC	GA-3N	TC2 39	SIBER	\$4,455.00	TCB 622	1-3	33/01/22	AB 111	A	A
Bacteriology-Laboratory		Incubator CO2	METTLER	PM 400	TC2 46	HISCO	\$18,507.00	TCB 622	1-3	33/01/22	AB 131	A	A
Bacteriology-Laboratory		Incubator Normal	MEMMERT	RE 80	TC2 46	HISCO	\$5,590.00	TCB 622	1-2	33/03/25	AB 133	A	A
Bacteriology-Laboratory		Microscope	NIKON	XP-21N	TC2 12	SHIRIO	\$9,575.00	TCB 622	1-2	33/03/25	AB 133	A	A
Bacteriology-Laboratory		Microscope	NIKON	TM-C2	TC2 13	SHIRIO	\$16,188.00	TCB 622	1-2	33/01/22	AB 141	A	A
Bacteriology-Laboratory		Mult-overhead pip	FLOMAB	77-657	TC2 55	SHIRIO	\$1,160.00	TCB 622	1-1	33/01/22	AB 142	A	A
Bacteriology-Laboratory		pH meter	ORION	SA450	TC2 35	DELMA	\$1,470.00	TCB 622	1-4	33/01/21	AB 151	A	A
Bacteriology-Laboratory		Pipette dispenser	ANALGENE	5245-00	TC2 29	DELMA	\$1,111.00	TCB 622	1-2	33/03/21	AB 161	A	C
Bacteriology-Laboratory		Refrigerator	Norwalk	MR-316	TC2 1	DELMA	\$1,600.00	TCB 622	1-5	33/01/27	AB 171	A	A
Bacteriology-Laboratory		Test Tube Rack	FLOMAB	SVW-52	TC2 96	DELMA	\$50.00	TCB 622	1-6	33/01/25	AB 181	A	A
Bacteriology-Laboratory		Water Bath	FLOMAB	WZ60	TC2 17	DELMA	\$2,031.80	TCB 622	1-4	33/01/27	AB 191	A	A
Bacteriology-Laboratory		Hemoglobin (Seward)	Seward	S1000	TC2 34	FILCO	\$3,950.00	TCB 623	1-1	33/04/05	AB 121	D	A
Bacteriology-Laboratory		Incubator, CO2	MEMMERT	RE-40	TC2 47	DELMA	\$3,955.00	TCB 623	1-2	33/03/10	AB 132	A	A
Bacteriology-Laboratory		Vacuum trap	Kawabishi	Vacuum	TC2 26	TAMAC	\$10,500.00	TCB 623	2-6	33/04/02	AB 191, 2	A	A
Bacteriology-Laboratory		Magnatic stirrer	JCA	Mini-MF	TC2 56	JCA	\$6,012.29	TCB 623	1-1	33/01/29	AB 221	A	A
Bacteriology-Laboratory		Magnatic stirrer	JCA	Mini-MF	TC2 56	JCA	\$6,012.29	TCB 623	1-1	33/01/29	AB 221	A	A

Department	Lab Name	Equipment	Item	QTY	Unit	Estimate	Account	Notes
Bacteriology-Laboratory	ELISA Reader	ELISA Reader	TC 5	24	TC 5	\$27,800.00	TC B 1/2	501022
Bacteriology-Laboratory	ELISA Washer	ELISA Washer	TC 6	20	TC 6	\$12,400.00	TC B 1/2	501010
Bacteriology-Laboratory	Filter Holder	Sanofi	TC 7	3	TC 7	\$230.00	TC B 2/1	501010
Bacteriology-Laboratory	Storage container	Systeme	TC 7	5	TC 7	\$163.25	TC B 2/1	501010
Bacteriology-Laboratory	Holografizer	USA	TC 5	1	TC 5	\$6,138.00	TC B 1/2	501010
Bacteriology-Laboratory	PCR Equipment	USA	TC 8	5	TC 8	\$14,750.00	TC B 3/1	501010
Bacteriology-Laboratory	Chromatography columns	USA	TC 8	6	TC 8	\$1,720.00	TC B 3/1	501010
Bacteriology-Laboratory	DNA electrophoresis system	USA	TC 8	7	TC 8	\$22,585.00	TC B 3/1	501010
Bacteriology-Laboratory	Belly Drencher Shaker	USA	TC 8	8	TC 8	\$2,880.00	TC B 3/1	501010
Bacteriology-Laboratory	Ironing machine	USA	TC 8	9	TC 8	\$315.00	TC B 3/1	501010
Bacteriology-Laboratory	Vacuum Desiccator	USA	TC 8	10	TC 8	\$165.00	TC B 3/1	501010
Bacteriology-Laboratory	Roller	USA	TC 9	1	TC 9	\$30,500.00	TC B 4/1	501010
Bacteriology-Laboratory	MP4 Polaroid camera	USA	TC 9	2	TC 9	\$595.00	TC B 4/1	501010
Bacteriology-Media Prep	Water bath	MEMMERT	TC 3	47	TC 3	\$2,037.80	TC B 5/2	501010
Bacteriology-Media Prep	Laminar Flow cabinet	USA	TC 2	31	TC 2	\$14,500.00	TC B 5/1	501010
Bacteriology-Media Prep	Magnetic Stirrer	USA	TC 2	50	TC 2	\$1,500.00	TC B 5/2	501010
Bacteriology-Washing	Ultra Sonic Cleaner	USA	TC 2	27	TC 2	\$5,460.00	TC B 5/2	501010
Bacteriology-Washing	Pipette Cleaner	USA	TC 2	27	TC 2	\$7,968.00	TC B 5/2	501010
Bacteriology-Experiment	Ultra Sonicator	USA	TC 4	1	TC 4	\$3,600.00	TC B 5/2	501010
Bacteriology-Experiment	Pipette dispenser	USA	TC 4	2	TC 4	\$3,500.00	TC B 5/2	501010
Bacteriology-Experiment	Pipette Aid	USA	TC 4	3	TC 4	\$648.00	TC B 5/2	501010
Bacteriology-Experiment	Autoclave	USA	TC 4	4	TC 4	\$9,015.00	TC B 5/2	501010
Bacteriology-Experiment	Microscope	USA	TC 4	5	TC 4	\$1,065.00	TC B 5/2	501010
Bacteriology-Experiment	Smoking Water bath	USA	TC 4	6	TC 4	\$1,080.00	TC B 5/2	501010
Bacteriology-Experiment	CO2 incubator	USA	TC 4	7	TC 4	\$5,000.00	TC B 5/2	501010
Bacteriology-Experiment	Portable table pH meter	USA	TC 4	8	TC 4	\$26,071.00	TC B 5/2	501010
Bacteriology-Experiment	Test tube basket	USA	TC 4	9	TC 4	\$340.00	TC B 5/2	501010
Bacteriology-Experiment	Teal tube basket	USA	TC 4	10	TC 4	\$65.00	TC B 5/2	501010
Bacteriology-Experiment	Microcentrifuge	USA	TC 5	1	TC 5	\$12,975.00	TC B 1/1	501010
Bacteriology-Experiment	Microcentrifuge	USA	TC 5	2	TC 5	\$48.00	TC B 1/1	501010
Bacteriology-Experiment	Microcentrifuge	USA	TC 5	3	TC 5	\$21.00	TC B 1/1	501010
Bacteriology-Experiment	Pressure Holder	USA	TC 5	4	TC 5	\$4,905.00	TC B 1/1	501010
Bacteriology-Experiment	Glass fibre Prefilter	USA	TC 5	5	TC 5	\$1,255.00	TC B 1/1	501010
Bacteriology-Experiment	Microoven	USA	TC 5	6	TC 5	\$3,600.00	TC B 1/1	501010
Bacteriology-Experiment	Ded Matrix Printer	USA	TC 5	11	TC 5	\$3,600.00	TC B 1/1	501010
Epidemiology-Epidemiology	Binder	USA	TC 2	109	TC 2	\$18,202.00	TC B 5/2	501010
Epidemiology-Epidemiology	Photocopier	USA	TC 2	109	TC 2	\$22,175.00	TC B 5/2	501010
Epidemiology-Epidemiology	Complexifier	USA	TC 2	109	TC 2	\$35,997.00	TC B 5/2	501010
Epidemiology-Epidemiology	Laser Printer	USA	TC 2	109	TC 2	\$1,116.00	TC B 5/2	501010
Epidemiology-Epidemiology	Plotter	USA	TC 2	109	TC 2	\$1,116.00	TC B 5/2	501010
Epidemiology-Epidemiology	Scanner	USA	TC 2	109	TC 2	\$1,116.00	TC B 5/2	501010
Epidemiology-Epidemiology	Refidicator	USA	TC 3	35	TC 3	\$110.00	TC B 5/2	501010
Epidemiology-Epidemiology	ELISA Microplate	USA	TC 4	1	TC 4	\$26,680.00	TC B 5/2	501010
Epidemiology-Epidemiology	Microplate Washer	USA	TC 4	2	TC 4	\$11,460.00	TC B 5/2	501010
Epidemiology-Epidemiology	ELISA Microplate	USA	TC 4	3	TC 4	\$1,260.00	TC B 5/2	501010
Epidemiology-Epidemiology	Multichannel	USA	TC 4	4	TC 4	\$1,824.00	TC B 5/2	501010
Epidemiology-Epidemiology	Multichannel	USA	TC 4	5	TC 4	\$1,116.00	TC B 5/2	501010
Epidemiology-Epidemiology	Microplate Center	USA	TC 4	6	TC 4	\$27,007.00	TC B 5/2	501010
Epidemiology-Epidemiology	Single Channel	USA	TC 4	7	TC 4	\$930.00	TC B 5/2	501010
Epidemiology-Epidemiology	Storage vial 2	USA	TC 4	8	TC 4	\$165.00	TC B 5/2	501010
Epidemiology-Epidemiology	Stainless steel	USA	TC 4	9	TC 4	\$53.00	TC B 5/2	501010
Epidemiology-Epidemiology	Pipette Drum	USA	TC 4	10	TC 4	\$26.00	TC B 5/2	501010
Epidemiology-Epidemiology	Shaker (plate)	USA	TC 4	11	TC 4	\$35.00	TC B 5/2	501010
Epidemiology-Epidemiology	Water bath	USA	TC 4	13	TC 4	\$975.00	TC B 5/2	501010
Epidemiology-Epidemiology	Test Tube Racks	USA	TC 4	14	TC 4	\$1,295.00	TC B 5/2	501010
Epidemiology-Epidemiology	Centrifuge (Nort)	USA	TC 4	15	TC 4	\$680.00	TC B 5/2	501010
Epidemiology-Epidemiology	Polaroid plate	USA	TC 4	16	TC 4	\$6,250.00	TC B 5/2	501010
Epidemiology-Epidemiology	Perforator	USA	TC 4	17	TC 4	\$9,850.00	TC B 5/2	501010
Epidemiology-Epidemiology	Dissecting scope	USA	TC 4	18	TC 4	\$2,483.60	TC B 5/2	501010
Epidemiology-Epidemiology	Autopsy Table	USA	TC 3	92	TC 3	\$110.00	TC B 5/1	501010
Epidemiology-Epidemiology	Glass syringe	USA	TC 3	34	TC 3	\$1,950.00	TC B 5/1	501010
Epidemiology-Epidemiology	Fish syringe	USA	TC 3	35	TC 3	\$35.00	TC B 5/1	501010
Epidemiology-Epidemiology	Fish Tracer	USA	TC 3	28	TC 3	\$3,300.00	TC B 5/1	501010
Epidemiology-Epidemiology	Offal Truck	USA	TC 3	31	TC 3	\$360.00	TC B 5/1	501010

Department	Project Name	Category	Phase	Start Date	End Date	Amount	Notes
Epidemiology-Preparation	Poultry Scale	TC3	37	8/20/81	8/20/81	\$250.00	TCB 63V1
Epidemiology-Preparation	Refrigerator	TC3	27	8/20/82	8/20/82	\$1,850.00	TCB 63V1
Epidemiology-Preparation	Utility Cart	TC3	30	8/20/82	8/20/82	\$460.00	TCB 63V1
Epidemiology-Preparation	Vacuum Cleaner	TC3	28	8/20/81	8/20/81	\$2,250.00	TCB 63V1
Epidemiology-Preparation	Feed Grinder	TC3	40	8/21/85	8/21/85	\$21,716.00	TCB 63V1
Epidemiology-Preparation	Feed Mill	TC3	25	8/20/81	8/20/81	\$35,000.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	11	8/20/82	8/20/82	\$955.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	13	8/21/85	8/21/85	\$3,054.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	12	8/20/82	8/20/82	\$2,900.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	19	8/20/82	8/20/82	\$28.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	18	8/20/82	8/20/82	\$5,000.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	9	8/20/81	8/20/81	\$290.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	10	8/20/82	8/20/82	\$260.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	39	8/20/82	8/20/82	\$260.00	TCB 63V1
Epidemiology-Preparation	Feed Mill-Feed Mill	TC3	45	8/20/82	8/20/82	\$350.00	Project Team 1-1
International-Multi Purpose	Table Tennis	ACE 61	4	8/20/81	8/20/81	Y 35,600	Expert Acco 1-1
JICA Team - Coordinator	Micro Recorder	ACE 61	3	8/20/81	8/20/81	Y 10,000	Expert Acco 1-1
JICA Team - Coordinator	Transformer	GG-62/2	25	8/20/81	8/20/81	\$800.00	Project Team 1-1
JICA Team - Coordinator	Mini Containers	GG-62/2	25	8/20/81	8/20/81	\$430.00	Project Team 1-1
JICA Team - Coordinator	Wooden Cupboard	GG-61/3	6	8/20/81	8/20/81	\$485.00	Project Team 1-1
JICA Team - Coordinator	Camera Auto Focus	GG-61/4	48	8/20/81	8/20/81	\$1,500.00	Project Team 1-1
JICA Team - Coordinator	Telephone Line	GG-62/4	41	8/20/81	8/20/81	\$240.90	Project Team 1-1
JICA Team - Coordinator	Electric Air	GG-62/4	11	8/20/81	8/20/81	\$1,000.00	Project Team 1-2
JICA Team - Coordinator	Key Telephone Extension	GG-62/4	11	8/20/81	8/20/81	\$303.00	Project Team 1-1
JICA Team - Coordinator	Atomelic Voltage	GG-62/4	4	8/20/81	8/20/81	\$480.00	TCB 62/2 1-2
JICA Team - Coordinator	Office safe	NP-216	2	8/20/81	8/20/81	\$1,240.00	TCB 62/2 1-1
JICA Team - Coordinator	Refridgerator	NP-216	2	8/20/81	8/20/81	\$2,200.00	TCB 62/2 1-1
JICA Team - Coordinator	Japanese Word Processor	NP-216	2	8/20/81	8/20/81	\$38,096.00	TCB 62/2 1-1
JICA Team - Coordinator	Station Wagon	NP-216	100	8/20/81	8/20/81	\$1,000.00	Project Team 1-2
JICA Team - Coordinator	Key Telephone Extension	NP-216	11	8/20/81	8/20/81	\$300.00	Project Team 1-1
JICA Team - Team Leader	Camera Flash	NP-216	17	8/20/81	8/20/81	\$350.00	Project Team 1-1
JICA Team - Team Leader	Camera Lens	NP-216	17	8/20/81	8/20/81	\$610.00	Project Team 1-1
JICA Team - Team Leader	Camera Lens	NP-216	17	8/20/81	8/20/81	\$900.00	Project Team 1-1
JICA Team - Team Leader	Camera SLR	NP-216	17	8/20/81	8/20/81	Y 850.00	Expert Acco 1-1
JICA Team - Team Leader	Personal Computer	NP-216	1	8/20/81	8/20/81	Y 140,600	Expert Acco 1-1
JICA Team - Team Leader	Printer	NP-216	2	8/20/81	8/20/81	\$1,362.53	Project Team 1-1
JICA Team - Team Leader	Computer Extension	NP-216	13	8/20/81	8/20/81	\$987.47	Project Team 1-1
JICA Team - Team Leader	Computer Sheet	NP-216	13	8/20/81	8/20/81	\$5,243.00	Project Team 1-1
JICA Team - Team Leader	Computer Hard Disk	NP-216	71	8/20/81	8/20/81	\$3,600.00	Project Team 1-1
JICA Team - Team Leader	Electric Key	NP-216	11	8/20/81	8/20/81	\$2,092.67	TCB 62/2 1-3
JICA Team - Team Leader	Facsimile	NP-216	37	8/20/81	8/20/81	\$7,823.00	TCB 3/1 1-1
JICA Team - Team Leader	Typewriter electric	NP-216	101	8/20/81	8/20/81	\$31,500.00	TCB 63V1 1
JICA Team - Team Leader	NEC Computer with printer	NP-216	11	8/20/81	8/20/81	\$9,463.50	TCB 63V1 1
Parasitology-Exp Horse	Boiling Sterilizer	NP-216	32	8/20/81	8/20/81	\$110.00	TCB 63V1 2
Parasitology-Exp Horse	Autoclave	NP-216	36	8/20/81	8/20/81	\$250.00	TCB 63V1 2
Parasitology-Exp Horse	Autopsy Instrument	NP-216	37	8/20/81	8/20/81	\$9,329.40	TCB 63V1 1
Parasitology-Exp Horse	Balancer	NP-216	6	8/20/81	8/20/81	\$1,070.00	TCB 63V1 1
Parasitology-Exp Horse	Centrifuge	NP-216	68	8/20/81	8/20/81	\$15,527.00	TCB 63V1 1
Parasitology-Exp Horse	EPG, OPG counter	NP-216	13	8/20/81	8/20/81	\$7,472.00	TCB 63V1 1
Parasitology-Exp Horse	Microscope	NP-216	13	8/20/81	8/20/81	\$10,493.00	TCB 63V1 1
Parasitology-Exp Horse	Microscope	NP-216	13	8/20/81	8/20/81	\$1,660.00	TCB 63V1 1
Parasitology-Exp Horse	MS Camera	NP-216	47	8/20/81	8/20/81	\$590.00	TCB 63V1 1
Parasitology-Exp Horse	Refrigerator	NP-216	31	8/20/81	8/20/81	\$250.00	TCB 63V1 1
Parasitology-Exp Horse	Sterilizer	NP-216	50	8/20/81	8/20/81	\$13,912.46	TCB 62/2 1-4
Parasitology-Exp Horse	Vortex mixer	NP-216	2	8/20/81	8/20/81	\$65.00	TCB 62/2 1-6
Parasitology-Exp Horse	Coaling Centrifuge	NP-216	2	8/20/81	8/20/81	\$2,145.00	TCB 62/2 1-3
Parasitology-Exp Horse	Deep Freezer	NP-216	23	8/20/81	8/20/81	\$4,485.00	TCB 62/2 1-4
Parasitology-Exp Horse	Dessicator	NP-216	39	8/20/81	8/20/81	\$18,507.00	TCB 62/2 1-1
Parasitology-Exp Horse	Digital Balance	NP-216	48	8/20/81	8/20/81	\$2,817.00	TCB 62/2 1-1
Parasitology-Exp Horse	Incubator CO2	NP-216	60	8/20/81	8/20/81	\$7,504.00	TCB 62/2 1-1
Parasitology-Exp Horse	Light Trap	NP-216	11	8/20/81	8/20/81	\$9,575.60	TCB 62/2 1-2
Parasitology-Exp Horse	Magnetic Stirrer	NP-216	12	8/20/81	8/20/81	\$16,188.00	TCB 62/2 1-3
Parasitology-Exp Horse	Microscope	NP-216	13	8/20/81	8/20/81	\$5,148.00	TCB 62/2 1-1
Parasitology-Exp Horse	Microscope	NP-216	15	8/20/81	8/20/81		

Pathology Laboratory	Equipment	CHION	SALES#	TC-2	35	2	DELIMA	TC-1	4	1-4	8500321	AHP 267	B	A
Pathology Laboratory	pH meter	MILGENE	5243-00	TC-2	29	-2	DELIMA	TC-1	4	1-4	8500321	AHP 267	B	A
Pathology Laboratory	Fluoride discard	National	943-316	TC-2	29	-2	DELIMA	TC-1	4	1-4	8500321	AHP 267	B	A
Pathology Laboratory	Pediatricator	FLCMLAB	SMFG-32	TC-2	1	-2	DELIMA	TC-1	6	1-6	860125	AHP 391	D	A
Pathology Laboratory	Test Tube Rack	FLCMLAB	SMFG-32	TC-2	35	-2	DELIMA	TC-1	50	10-50	860127	AHP 267	D	A
Pathology Laboratory	Water bath	MEMMERT	WA-350	TC-2	17	-2	DELIMA	TC-1	1	1	860323	AHP 371	B	A
Pathology Laboratory	Microome knife(SHARRNER)	Reichert	904	TC-2	70	-2	BIO-DIOGENISTIC	TC-1	1	1	860319	AHP 411	D	A
Pathology Laboratory	Microome (Retary)	Yamatoko	UR-65	TC-2	58		DELIMA	TC-1	1	1	860310	AHP 221	A	A
Pathology Laboratory	Microome (SLIDES)	Ikanoto	SC-5	TC-2	105		FLCO	TC-1	1	1	860408	AHP 441	A	A
Pathology Laboratory	Specimen (SHARKEER)	Shurt	8041	TC-2	72		DELIMA	TC-1	1	1	860319	AHP 471	A	A
Pathology Laboratory	Tissue Embedding and VAC	Reichert	8041	TC-2	79		BIO-DIOGENISTIC	TC-1	1	1	860319	AHP 471	A	A
Pathology Laboratory	Microplasia	Miyahyo	5000 DVG	TC-5	7		INTERSCIENCE	TC-1	1	1	901110	AHP 272	A	A
Pathology Laboratory	Slide Cabinet	BDH	60000	TC-5	6		HISTOCENTER	TC-1	5-6	5-6	910327	AHP 543	A	A
Pathology Laboratory	Crystal Filter/J	2RODE	LEIDA	TC-7	4		HISTOCENTER	TC-1	1-1	1-1	920924	AHP 345	A	A
Pathology Laboratory	Workcenter	HEIDOLPH	REAZ 2000	TC-3	19		ELUMI JWVA	TC-1	1-1	1-1	920701	AHP 293	A	A
Pathology Laboratory	Refrigerator, Normal 4 C	SINGER	380	TC-3	20		SINGER	TC-1	1-1	1-1	920701	AHP 293	A	A
Pathology Laboratory	Hair Dryer	SINGER	301	TC-3	21		SINGER	TC-1	1-1	1-1	920701	AHP 841	B	A
Pathology Laboratory	Water baths for Misto Sections	AJ DUPE	MH 6153B	TC-3	22		ELUMI JWVA	TC-1	1-1	1-1	920923	AHP 262	A	A
Pathology Laboratory	Hot Plate Stirrer	STUART	SM3	TC-3	23		ELUMI JWVA	TC-1	1-1	1-1	920617	AHP 344	A	A
Pathology Laboratory	Fume Hood	CHOONG	CHC-100	TC-3	24		CHOONG KCK	TC-1	1-1	1-1	921201	AHP 82	A	A
Pathology Laboratory	Wax bath (backers)(SPARE)	SHANDON	SL-230240V	TC-3	25		ELUMI JWVA	TC-1	1-1	1-1	921112	AHP 362	D	A
Pathology Laboratory	Lab Bench "LOCAL"	REMOCO	EM 400	TC-3	26		REMOCO	TC-1	1-1	1-1	920728	AHP 535	A	A
Pathology Laboratory	Incubator	MEMMERT	EM 400	TC-3	27		ELUMI JWVA	TC-1	1-1	1-1	920923	AHP 363	A	A
Pathology Laboratory	Cupboard for BM Specimens	REMOCO	-	TC-3	29		REMOCO	TC-1	1-1	1-1	920424	AHP 543	A	A
Pathology Laboratory	Vacuum cleaner	SINGER	151	TC-3	5		HISTOCENTER	TC-1	1-1	1-1	920701	AHP 562	B	A
Pathology Laboratory	Utility microtome	Wittner	105A	TC-3	6		HISTOCENTER	TC-1	1-1	1-1				
SPF Unit-Preparation	Pedicle container	Wittner	6945M	TC-3	16		DELIMA	TC-3	5	5	880729	A5P 15,15	A	A
SPF Unit-Preparation	Poly bucket	Wittner	6945M	TC-3	16		DELIMA	TC-3	5	5	880729	A5P 14,14	B	A
SPF Unit-Preparation	Poultry Scale	Ojima	N75	TC-3	6		INTERSCIENCE	TC-3	2	2	880319	A5P 4,41	C	A
SPF Unit-Preparation	Milky can	Victor	VH 19	TC-3	5		QUICKLAB	TC-3	2	2	880328	A5P 5,61	A	A
SPF Unit-Preparation	Vacuum Cleaner	Mumatic	WVE-150	TC-3	3		INTERSCIENCE	TC-3	2	2	880319	A5P 3,37	A	A
SPF Unit-Preparation	Chick Cage	Yuba	1H 932	TC-3	24		QUICKLAB	TC-3	10	10	880322	A5P 9,91	C	A
SPF Unit-Preparation	Dust Mask	Gerson	Mask	TC-3	23		INTERSCIENCE	TC-3	5	5	880319	A5P 18	A	A
SPF Unit-Preparation	Scoop large	Quicklab	Small	TC-3	20		QUICKLAB	TC-3	5	5	880322	A5P 7, 71	D	A
SPF Unit-Preparation	Scoop small	Quicklab	Small	TC-3	21		QUICKLAB	TC-3	5	5	880322	A5P 6,61	A	A
SPF Unit-Preparation	Sheliser	Galltraka	SYF-340	TC-2	31		DELIMA	TC-2	2	2	880723	A5P 1	A	A
SPF Unit-Preparation	Knife	Quicklab	0-0608-00	TC-3	9-1		QUICKLAB	TC-3	2	2	937			
SPF Unit-Preparation	Knife Key	Quicklab	0-0608-00	TC-3	9-2		QUICKLAB	TC-3	2	2	937			
SPF Unit-Preparation	Eccentric Housing	Quicklab	0-629-00	TC-3	9-3		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Dowel Pin	Quicklab	3-2157-00	TC-3	9-4		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Retaining Ring	Quicklab	3-0111-00	TC-3	9-5		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Gearing Turnon	Quicklab	3-0276-00	TC-3	9-6		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Lock Nut SKF	Quicklab	3-0066-00	TC-3	9-7		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Lock Washer SKF	Quicklab	3-0311-00	TC-3	9-8		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Seal National	Quicklab	0-0630-00	TC-2	9-9		QUICKLAB	TC-2	4	4	937			
SPF Unit-Preparation	Eccentric Housing Cover	Quicklab	3-9001-07	TC-3	9-10		QUICKLAB	TC-3	6	6	937			
SPF Unit-Preparation	Machine Screw	Quicklab	3-0182-00	TC-3	9-11		QUICKLAB	TC-3	6	6	937			
SPF Unit-Preparation	Pipe Plug	Quicklab	0-0646-00	TC-3	9-12		QUICKLAB	TC-3	1	1	937			
SPF Unit-Preparation	Roller Shaft	Quicklab	3-0277-00	TC-3	9-13		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Bearing Turnon	Quicklab	3-0312-00	TC-3	9-14		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Roller Small Steel	Quicklab	3-0633-00	TC-3	9-15		QUICKLAB	TC-3	6	6	937			
SPF Unit-Preparation	Seal Housing	Quicklab	0-0648-00	TC-3	9-16		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Seal Plate	Quicklab	3-9000-00	TC-3	9-17		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Machine Screw	Quicklab	0-0647-00	TC-3	9-18		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Roller Small Collet	Quicklab	3-9119-00	TC-3	9-19		QUICKLAB	TC-3	2	2	937			
SPF Unit-Preparation	Skt Screw	Quicklab	0-0624-01	TC-3	9-20		QUICKLAB	TC-3	2	2	937			
SPF Unit-Preparation	Roller	Quicklab	3-9017-00	TC-3	9-21		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Cap Screw	Quicklab	3-9055-00	TC-3	9-22		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Lock Washer	Quicklab	0-0700-00	TC-3	9-23		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Die Assembly	Quicklab	0-0565-00	TC-3	9-24		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Die Key	Quicklab	0-0622-01	TC-3	9-25		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Die Clamp	Quicklab	3-9035-02	TC-3	9-26		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Die Cleanup Bowl	Quicklab	3-9045-00	TC-3	9-27		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	N/A	Quicklab	3-0331-00	TC-3	9-28		QUICKLAB	TC-3	4	4	937			
SPF Unit-Preparation	Wrench	Quicklab	3-0331-00	TC-3	9-29		QUICKLAB	TC-3	4	4	937			

SPF Unit-SPF	Safety Equipment		AGE63	15	MR KAR	Expert Acco	3-3	C	A
SPF Unit-Experiment	Electronic Digital	Tanila	TC 4	1	SCHBE	\$246.00	TC B 63/2	2-2	8803/21
SPF Unit-Experiment	Altimeter electrical	Foot-Low	TC 4	3	INTERSCIENCE	\$1,750.00	TC B 63/2	2-2	8903/20
SPF Unit-Experiment	Extension wire	Local	TC 4	3	B/Lee	\$195.00	TC B 63/2	1-1	8903/24
SPF Unit-Experiment	Compressed air	Facal 2	TC 4	4	QUICKLAB	\$3,998.00	TC B 63/2	1-1	8903/23
Training-Experiment	Lyon Precision	Par for	TC 5	1	QUICKLAB	\$1,806.00			
Training-Experiment	Microscope	YS2H	TC 2	9	SHIRO	\$3,398.00	TC B 63/1	4	8803/29
Training-Experiment	Microscope	SMZ-5B	TC 2	9	SHIRO	\$4,212.00	TC B 63/1	1	8803/29
Training-Experiment	Microscope	TM5	TC 2	9	SHIRO	\$7,822.00	TC B 63/1	1	8803/29
Training-Experiment	Refrigerator	Sanyo	TC 3	47	QUICKLAB	\$1,050.00	TC B 63/1	1	8803/22
Training-Experiment	Vortexer	Thermaly	TC 2	50	FILCO	\$325.00	TC B 63/1	2	8801/22
Training-Laboratory	Cooling Centrifuge	HITACHI	TC 2	4	MESCOVB	\$13,912.45	TC B 62/2	1-4	8801/29
Training-Laboratory	Dessicator	ILUCH	TC 2	23	HISCO	\$2,145.00	TC B 62/2	1-10	8803/31
Training-Laboratory	Incubator CO2	MEMMERT	TC 2	46	HISCO	\$18,507.00	TC B 62/2	1-4	8803/31
Training-Laboratory	Magnetic stirrer	KAMAG	TC 2	56	HISCO	\$807.00	TC B 62/2	1-3	8801/20
Training-Laboratory	Balance	FA-100	TC 2	37	SIBER	\$4,465.00	TC B 62/3	1-1	8803/24
Training-Laboratory	Microtitrators	Tommy	TC 2	22	FILCO	\$9,588.00	TC B 62/2	3-3	8804/07
Training-Office	Photocopier	Canon	GG-67/3	26	SUMITAN	\$4,000.00	Project Team	1-1	8801/21
Training-Preparation	Autopsy Instrument	Gallenka	TC 3	36	ANTAH	\$110.00	TC B 63/1	2	8803/23
Training-Preparation	Dessicator	ILUCH	TC 2	23	HISCO	\$2,145.00	TC B 62/2	1-10	8803/31
Training-Preparation	Test Tube rack	FLCMLAB	TC 2	96	FLCMLAB	\$50.00	TC B 62/2	10-50	8801/27
Training-Preparation	Water Bath	Martini	TC 2	17	DELIMA	\$2,037.90	TC B 62/2	1-4	8803/22
Training-Preparation	Cooling Centrifuge	ELMO	TC 2	105	HISCO	\$1,323.00	TC B 62/1	1-2	8801/20
Virology-Common Equip	Cooling Centrifuge	Hilachi	TC 2	5	MESCOVB	\$42,037.00	TC B 62/1	1-1	8709/07
Virology-Common Equip	Ultra Deep Freezer	Sanco	TC 2	3	HISCO	\$18,767.00	TC B 62/1	1-2	8707/04
Virology-Common Equip	Deep Freezer	SANYO	TC 2	2	HISCO	\$5,655.00	TC B 62/2	1-5	8703/01
Virology-Common Equip	Ice Maker	HLEAPD	TC 2	82	HISCO	\$6,590.00	TC B 62/2	1-1	8702/01
Virology-Common Equip	Centrifuge Accessories	REVCO	TC 2	3	HISCO	\$18,472.00	TC B 62/3	1-1	8703/01
Virology-Common Equip	Dry Ice maker	Hilachi	TC 2	83	FILCO	\$1,250.00	TC B 62/3	1-1	8703/01
Virology-Common Equip	Hand Churner	Norio	TC 6	3	FILCO	\$4,750.00	TC B 1/2	2-2	8804/06
Virology-Common Equip	Freeze Drying	Messner	TC 6	1	QUICKLAB	\$1,757.00	TC B 1/2	## ##	8701/31
Virology-Common Equip	Freeze Drying	Samco	TC 6	2	QUICKLAB	\$1,757.00	TC B 1/2	## ##	8701/31
Virology-Common Equip	Lubrication	Joko	TC 3	23	DELIMA	\$169.00	TC B 1/2	3-3	8701/31
Virology-Experiment	Agglutination	Agglutin	TC 3	23	DELIMA	\$1,500.00	TC B 63/1	1	8901/12
Virology-Experiment	Autopsy Instrument	Gallenka	TC 3	36	ANTAH	\$110.00	TC B 63/1	2	8903/23
Virology-Experiment	Egg Incubator	K-20E	TC 2	51	DELIMA	\$4,700.00	TC B 63/1	1	8901/12
Virology-Experiment	German Immuno	7005/04	TC 2	44	FLCMLAB	\$5,610.00	TC B 63/1	1	8809/08
Virology-Experiment	Incubator normal	Sanco	TC 2	46	SIN,CHI	\$65.00	TC B 63/1	8	8807/19
Virology-Experiment	Incubator normal	55 x 100	TC 2	46	MINGKEE	\$1,468.00	TC B 63/1	8	8807/20
Virology-Experiment	Microscope	Nikon	TC 2	10	SHIRO	\$7,822.00	TC B 63/1	1	8803/29
Virology-Experiment	Microtitrators	Volac	TC 2	22	FILCO	\$2,810.00	TC B 63/1	1	8801/22
Virology-Experiment	MS Phase Centrifuge	Nikon	TC 2	13	SHIRO	\$5,212.00	TC B 63/1	1	8803/29
Virology-Experiment	Refrigerator	Sanyo	TC 2	1	DELIMA	\$7,000.00	TC B 63/1	1	8901/12
Virology-Experiment	Refrigerator	Sanyo	TC 3	47	QUICKLAB	\$1,080.00	TC B 63/1	1	8803/22
Virology-Experiment	Egg Incubator	Par EKO	TC 2	51	HISCO	\$12,500.00	TC B 62/2	1-1	8804/23
Virology-Laboratory	Uv Light Steril	Chuang	GC-62/1	3	CHOOING	\$1,170.00	Project Team	1-1	8707/10
Virology-Laboratory	Whirlmizer	MM-220	GR-62/1	30	LABORATORY	\$580.00	Project Team	1-1	8806/13
Virology-Laboratory	Microwave Oven	Toshiba	GR-62/3	39	M.P. TAN	\$639.00	Project Team	1-1	8713/12
Virology-Laboratory	Cooling Centrifuge	Hilachi	TC 2	4	MESCOVB	\$17,940.00	TC B 61/2	3-3	8703/24
Virology-Laboratory	Magnetic Stirrer	Toyo Ros	TC 2	56	FILCO	\$2,052.00	TC B 61/2	1-1	8703/28
Virology-Laboratory	pH Meter	Honda	TC 2	35	MESCOVB	\$5,900.00	TC B 61/2	1-1	8703/28
Virology-Laboratory	Precision Balance	Mettler	TC 2	36	SIBER	\$5,900.00	TC B 61/2	1-1	8703/28
Virology-Laboratory	Water Bath	Toyo Ros	TC 2	17	DELIMA	\$2,900.00	TC B 61/2	1-1	8703/28
Virology-Laboratory	Deep Freezer	Sanyo	TC 2	2	DELIMA	\$9,326.00	TC B 62/1	1-6	8703/29
Virology-Laboratory	Autoclave	SM-240	TC 2	32	FILCO	\$5,715.00	TC B 62/2	1-2	8802/13
Virology-Laboratory	Deep Freezer	Sanyo	TC 2	2	HISCO	\$5,655.00	TC B 62/2	1-6	8803/31
Virology-Laboratory	Dessicator	ILUCH	TC 2	23	HISCO	\$2,145.00	TC B 62/2	1-10	8803/31
Virology-Laboratory	Egg Cantler	FLUJARA	TC 2	53	DELIMA	\$193.00	TC B 62/2	1-1	8803/10
Virology-Laboratory	Homogenizer	K4	TC 2	33	HISCO	\$3,470.00	TC B 62/2	1-1	8803/29
Virology-Laboratory	Incubator CO2	LEEC	TC 2	46	HISCO	\$18,507.00	TC B 62/2	1-4	8804/23
Virology-Laboratory	Incubator Normal	MEMMERT	TC 2	46	DELIMA	\$5,290.00	TC B 62/2	1-2	8803/26
Virology-Laboratory	Microscope	Nikon	TC 2	13	SHIRO	\$24,075.00	TC B 62/2	1-1	8801/22
Virology-Laboratory	Microscope	Nikon	TC 2	14	SHIRO	\$9,575.00	TC B 62/2	1-3	8801/22
Virology-Laboratory	Microtitrators	DYNATECH	TC 2	22	BIO-DIAGONAL	\$30,780.00	TC B 62/2	1-1	8801/22

Virology-Laboratory	Muller, Omeriel	FLCMLAB	77-667	TC 2	55	FLCMLAB	\$1,180.00	TCB 632	1-2	8601/27	AV 7/1	A
Virology-Laboratory	Pipette Discard	NALGENE	5242-00	TC 2	29	FLCMLAB	\$111.00	TCB 632	2-5	8601/27		A
Virology-Laboratory	Refrigerator	National	AP-516	TC 2	1	DELIMA	\$1,600.00	TCB 632	1-6	8601/25	AV 2/1	A
Virology-Laboratory	Sonicator	BRANSON	250	TC 2	36	MEOOMB	\$7,300.00	TCB 632	1-1	8603/09	AV 8/1	B
Virology-Laboratory	Stentliser	AJ COPE	SP-700	TC 2	31	MENAFLO	\$1,722.00	TCB 632	1-1	8603/02	AV 19/1	A
Virology-Laboratory	Ted Tube Rack	Flowlab	SPMG 22	TC 2	96	FLCMLAB	\$60.00	TCB 632	10-50	8601/27		A
Virology-Laboratory	Vertex (test tube)	ThermoFoly	MAXAMI	TC 2	50	HISCO	\$387.00	TCB 632	1-1	8601/29	AV 12/1	A
Virology-Precision	Peristaltic Pump	Alto	SJ-1220	TC 2	19	FILCO	\$2,530.00	TCB 632	1-3	8604/06	AV 26/1	B
Virology-Laboratory	Rolling Drum	Bellco	Folling	TC 2	28	FILCO	\$5,022.00	TCB 632	1-1	8604/05	AV 3/3	B
Virology-Laboratory	Vacuum Trap	Kawasaki	Vacuum	TC 2	26	TAMAC	\$10,500.00	TCB 632	2-6	8604/02	AV 27/1, 2	A
Virology-Laboratory	Brushing Machine	LEEC	BRAC	TC 5	13	FILCO	\$4,700.00	TCB 1/2	1-1	901/24	AV 36/1	A
Virology-Laboratory	Rubber Shoppers	BELLCO	Silicon	TC 6	17	FILCO	\$4,264.00	TCB 1/2	28-28	901/24		A
Virology-Laboratory	Flow Rotor	FPLC 10	FPLC 10	TC 7	7	MEOOMB	\$8,640.00	TCB 2/1	1-1	91/01/31		A
Virology-Laboratory	Collector Assy	Hitachi	217345 A	TC 7	8	MEOOMB	\$5,650.00	TCB 2/1	1-1	91/03/22		A
Virology-Laboratory	Seal Unit Assy	Hitachi	217340 A	TC 7	10	MEOOMB	\$7,476.00	TCB 2/1	1-1	91/03/22		B
Virology-Laboratory	W/E Liquid Nitrogen Tank	Alto	SCS362	TC 6	1	QUIXLAB	\$2,710.00	TCB 1/2	3-3	91/01/31	AV 28/5, 6, 7	A
Virology-Laboratory	Cold Chamber	Mettrom	620	TC 6	2	QUIXLAB	\$3,702.77	TCB 1/2	1-1	91/01/31	AV 24	A
Virology-Laboratory	pH Meter	Nelatom	CS90K	TC 6	4	QUIXLAB	\$2,503.00	TCB 1/2	1-1	91/01/31	AV 14/2	A
Virology-Laboratory	Air Condition	BELCO		TC 6	5	QUIXLAB	\$8,309.00	TCB 1/2	1-1	91/01/31	AUC 6/1, AC 11/1	A
Virology-Laboratory	Roller bottle	BELCO		TC 6	6	QUIXLAB	\$1,853.00	TCB 1/2	20-20	91/01/31		A
Virology-Laboratory	Roux bottles	BELCO		TC 6	7	QUIXLAB	\$840.00	TCB 1/2	20-20	91/01/31		A
Virology-Laboratory	Tissue Culture	BELCO		TC 6	8	QUIXLAB	\$1,690.00	TCB 1/2	50-50	91/01/31		A
Virology-Laboratory	Reagent bottles	UXB		TC 6	9	QUIXLAB	\$1,527.00	TCB 1/2	50-50	91/01/31		A
Virology-Laboratory	Fraction Collector	Biorad		TC 6	11	QUIXLAB	\$19,250.00	TCB 1/2	1-1	91/01/31	AV 35/1, 2, 3, 4, 5	B
Virology-Laboratory	Fraction Column	LEEC		TC 6	12	QUIXLAB	\$4,705.00	TCB 1/2	1-1	91/01/31		B
Virology-Laboratory	Brushing Machine	BELCO		TC 6	13	FILCO	\$4,700.00	TCB 1/2	1-1	901/24		A
Virology-Laboratory	Tissue Culture	BELCO		TC 6	14	QUIXLAB	\$1,590.00	TCB 1/2	## # #	91/01/31		A
Virology-Laboratory	Silicon Rubber	Barrington	SSA0-D2	TC 6	17	FILCO	\$4,284.00	TCB 1/2	## # #	901/24		A
Virology-Laboratory	Staker Flatiron	Pharmacia	ET	TC 7	1	QUIXLAB	\$7,728.00	TCB 2/1	1-1	91/01/31	AV 13/3	A
Virology-Laboratory	Vertical gel	UXB		TC 7	2	QUIXLAB	\$1,560.00	TCB 2/1	1-1	91/01/31	AV 13/3	A
Virology-Laboratory	Thermoscientific	Muller		TC 7	3	QUIXLAB	\$14,713.00	TCB 2/1	1-1	91/01/31	AV 38/1	B
Virology-Laboratory	Laboratory Cabinet	Deltan	JCA-721	TC 7	4	QUIXLAB	\$7,701.00	TCB 2/1	1-1	91/01/31	AV 38/1	B
Virology-Laboratory	Peristaltic Pump	UXB	19-4610	TC 7	5	QUIXLAB	\$5,200.00	TCB 2/1	2-2	91/01/31	AV 23/1, 8	B
Virology-Laboratory	Pipette Aid	Drummond	44-B-22	TC 7	11	QUIXLAB	\$5,000.00	TCB 2/1	1-1	91/01/31	AV 35/3	A
Virology-Laboratory	Shaker/Cabinet	Sairmen	PH-120	TC 7	12	QUIXLAB	\$895.00	TCB 2/1	3-3	91/01/31		A
Virology-Laboratory	Stainless Tray	REMO	M19	TC 7	14	QUIXLAB	\$16,960.00	TCB 2/1	1-1	91/01/31	AV 37/1	A
Virology-Laboratory	Laboratory storage shelf	USA		TC 8	31	REMO	\$4,150.00	TCB 3/1	1-1	92/07/28	AV 23/1, 9 AV 23/20 A	A
Virology-Laboratory	Face mask with accessories	TOYO	NALGENE	TC 8	32	PILPARITE	\$1,212.00	TCB 3/1	1-1	92/09/02		A
Virology-Laboratory	Large Filter's holder & receiver	USA		TC 8	33	QUIXLAB	\$7,616.00	TCB 3/1	1-1	92/06/13		A
Virology-Laboratory	Safety burner	USA	CA 20B2	TC 8	34	MEOOMB	\$4,200.00	TCB 3/1	1-1	92/09/02	AV 39/2, 39/2	A
Virology-Laboratory	Hitachi refridgerator high speed centrifuge			TC 8	35	MEOOMB	\$42,595.00	TCB 3/1	1-1	92/09/27	AC 2/2	B
Virology-Laboratory	Carbon dioxide gas tank			TC 8	36	GLASCHEM LAB	\$663.00	TCB 3/1	1-1	92/04/03		A
Virology-Laboratory	Microcentrifuge with accessories			TC 9	7	SAFALAT	\$14,725.00	TCB 4/1	1-1	93		A
Virology-Laboratory	PAGE protein eluter			TC 9	8	PILPARITE	\$5,285.00	TCB 4/1	1-1	93		A
Virology-Precision	ELISA Apparatus	Flowlab	MCG 340	TC 2	84	FLCMLAB	\$39,578.00	TCB 5/2	1-1	8601/27	AV 1/1	B
Virology-Precision	Fraction Collector	UXB	I.C.S.	TC 2	85	SIBER	\$19,000.00	TCB 5/2	1-1	8601/22	AV 2/1	A
Virology-Precision	Precision Balance	METTLER	4E 200	TC 2	38	SIBER	\$6,750.00	TCB 5/2	1-1	8601/22	AV 1/1	B
Virology-Precision	Spectrophotome	HITACHI	U-2000	TC 2	88	MEOOMB	\$16,083.00	TCB 5/2	1-1	8601/27	AV 1/1	B
Virology-Precision	Electron micrograph	Hoerb	TE 424	TC 2	87	FILCO	\$7,914.00	TCB 5/1	1	8611/22	AV 1/1	B
Virology-Precision	ELISA Apparatus	Dynalab	AMS2	TC 2	84	BIO-DIAGNOSTIC	\$6,100.00	TCB 5/1	1	8611/27	AV 1/1	B
Virology-Precision	Ultra Speed Centrifuge	HITACHI	SRP 70H	ACE 63	13	DR. HAHFA	\$113,054.00	TCB 6/1	1-1	8611/27	AV 1/1	A
Virology-Precision	Magnetic Stir Balance	Verax	Verax	TC 2	16	HGBMEYER	\$18,300.00	TCB 6/1	1-1	8603/23		A
Virology-Experiment	ELISA Software	Flowlab	SPANCF	TC 4	1	FLCMLAB	\$2,233.00	TCB 6/1	1	8603/23	AV 11/1	A
Virology-Experiment	Magnetic Stirrer	UXB	MMR-MR	TC 4	2	HISCO	\$4,369.00	TCB 6/2	1-1	8603/24	AV 17/4	A
Virology-Experiment	Ultra Deep Freezer	Sanyo	TC 1200	TC 4	3	HISCO	\$3,829.00	TCB 6/2	1-1	8603/24	AV 3/2	A
Virology-Experiment	Homogenizer/shaker	Ika	T 25	TC 4	4	HISCO	\$8,183.00	TCB 6/2	1-1	8603/24		A
Virology-Experiment	ELISA Microplate	Roller Bottles		TC 4	5	FLCMLAB	\$150.00	TCB 6/2	20-20	8603/24		A
Virology-Experiment	Roller Bottles	Belco		TC 4	6	FILCO	\$2,750.00	TCB 6/2	12-12	8603/23		A
Virology-Experiment	Transilluminat	Spectron	TC-312A	TC 4	7	FILCO	\$6,339.00	TCB 6/2	1-1	8603/23	AV 13/1	C
Virology-Experiment	Horizontal electroinc	Hoerb	HE 99	TC 4	8	QUIXLAB	\$1,021.50	TCB 6/2	1-1	8603/23	AV 13/5	B
Virology-Experiment	Electrophoresis	Alto	Alto	TC 4	9	FILCO	\$5,761.50	TCB 6/2	2-1	8603/23	AV 13/4	B
Virology-Experiment	CO2 incubator	Hiresawa	CPD 172	TC 4	10	FILCO	\$48,967.50	TCB 6/2	1-1	8603/23	AV 13/4	A
Virology-Experiment	Microcentrifuge cabinet	Flowlab	61-210	TC 4	11	FLCMLAB	\$70,000.00	TCB 6/2	10-10	8603/24		A

Virology-Experiment	Membrane filter	Toyo	TC 4	12	FILCO		\$535.00	TAC B 532	5-5	89/03/23		A	D
Virology-Experiment	Water Bath	Merritt	TC 4	13	INTERSCIENCE		\$1,350.00	TAC B 532	1-1	89/03/24	AV 13/2	D	A
Virology-Experiment	Utility Centrally	Victors	TC 4	14	QUIOXLAB		\$550.00	TAC B 532	2-2	89/03/23	AV 32/1, 2	A	A
Virology-Experiment	LN Link Scale	Chyn	TC 4	15	QUIOXLAB		\$240.00	TAC B 532	2-2	89/03/23	AV 28/4, 5	A	A
Virology-Experiment	Pasteur Pipette	Loxal	TC 4	16	QUIOXLAB		\$45.00	TAC B 532	5-5	89/03/23		A	D
Virology-Experiment	Gas Mask (ECH)	Exel	TC 4	17	FILCO		\$4,288.00	TAC B 532	1-1	89/03/23	ECH 1	B	A
Virology-Experiment	Gas Mask (ECH)	Lynward	TC 4	17	FILCO		\$505.00	TAC B 532	1-1	89/03/23	ECH 2	B	A
Virology-Experiment	Centrifuge Tube	Ornuis	TC 4	18	QUIOXLAB		\$400.00	TAC B 532	1-1	89/03/23	ACS 10/1	A	D
Virology-Experiment	UV Lamp set	MC	TC 4	19	INTERSCIENCE		\$220.00	TAC B 532	1-1	89/03/24		A	A
Virology-Experiment	Filler/air System	Toyo	TC 4	20	FILCO		\$14,575.00	TAC B 532	1-1	89/03/23	AV 31/2-5	B	A
Virology-Experiment	Pipette shelf	16' LX 13	TC 4	21	OKFoon		\$180.00	TAC B 1/1	2-2	89/02/08	AV 33/1, 2	A	A
Virology-Experiment	Liquid Nitrogen	NVE	TC 5	1	FILCO		\$2,700.00	TAC B 1/1	1-1		AV 28/4	A	A
Virology-Experiment	Eqd Incubator	Shreve	TC 5	3	QUIOXLAB		\$12,200.00	TAC B 1/1	1-1		AV 2/4	A	D
Virology-Experiment	Ultra Filter	MFS	TC 5	4	FILCO		\$2,315.00	TAC B 1/1	1-1		AV 34/1	A	D
Virology-Experiment	Pressure Vessel	Toyo Rbs	TC 5	5	FILCO		\$3,177.00	TAC B 1/1	1-1		AV 31/6	B	A
Virology-Experiment	Pressure Holder	AS-142	TC 5	6	FILCO		\$3,034.00	TAC B 1/1	1-1		AV 31/4	A	D
Virology-Experiment	Swinging Rotor	SHP-67SA	TC 5	7	MEDCMB		\$21,507.00	TAC B 1/1	1-1		AV 5/1	B	A

USAGE AND PROBLEM OF APDRTC ROOMS

A. Daily

B. More than Once a week

C. More than Once a Month

	CONDITION (Problems)	USAGE
Administration		
Director's Room	Aircond	A
Team Leader's Room	Good	A
Coordinator's Room	Floor	A
Conference Hall	Good	C
Entrance Hall	Cracks	A
Office	Cracks, Floor, Alarm	A
Ground Floor		
-20Cold Room	Cracks, Moldy, Rusty	C
Washing. Sterlizing Room	Good	A
Ultra Centrifuge Room	Floor	C
Freeze Drying Room	Good	B
Photo Dark Room	Cracks	B
Pathology	Good	A
Tissue Sectioning Room	Good	B
Parasitology	Good	A
EM preparation Room	Good	B
Transmission EM Room	Good	B
Scanning EM Room	Good	B
Stairs	Good	A
Corridor	Good	A
First Floor		
Worker's Room	Good	A
Precision Instrument Room	Good	B
Common Equipment Room	Good	B

Nitlogen Cyl Room	Good	A
Viology	Good	A
Incubator Room	Good	A
Bacteriology	Good	A
Ref. & Data Proc. Room	Good	C
Meeting Room	Good	A
Corridor	Good	A
Trainning Building		
Ground Floor		
Office	Good	C
Instrument Room	Good	C
Preparation Room	Good	C
Training Room	Good	C
Stairs	Tiles	A
Corridor	Good	A
First Floor		
Lecture Room	Good	C
Epidemiology	Good	A
Preparation Room	Cracks	B
International Hostel	See Annex 1	See Annex 2
SPF Poultry House	Water heater, Leaking, Floor Lumps,	A
	Electric Lines at Fumigation Room	
	Rust at Fumigation Room	
Feedmill	Electric Wire Cover, Window Mesh	A
Septic Tank	Overflow	A
Experimental Chicken House	Good	B

PROBLEMS ARISED IN APDRTC HOSTEL

<u>Specified Place</u>	<u>Problems</u>
1. Ladies Bathroom	Broken Tiles - Replaced with new tiles
2. Kitchen Refridgerator	Spoilt - Replaced spare part
3. Suite SO3	Ceiling Leakage - Patched up
4. Toilet outlet	Stuck - Outlet was cleared by plumber
5. Hostel	Black Out - Due to high concumtion of voltage Local Technician checked and adjusted
6. Water Outlet	Stuck - Outlet was cleared by plumber
7. Fans	Spoilt- Replaced with new fans
8. Air-condition	Spoilt - Repaired and replaced spare parts

* All the problems above have been overcome.

* At present there are no problems

OCCUPANCY OF APDRTC HOSTEL FOR 1991

MONTH	NUMBER OF PERSON	NUMBER OF NIGHTS	PURPOSE
JANUARY	29	101	LOCAL MEETING
FEBRUARY	9	12	LOCAL MEETING
MARCH	16	80	LOCAL MEETING
APRIL	3	3	LOCAL MEETING
MAY	8	18	LOCAL MEETING
JUNE	34	93	LOCAL MEETING
JULY	48	395	LOCAL MEETING
AUGUST	28	119	LOCAL MEETING
SEPTEMBER	14	28	LOCAL MEETING
OCTOBER	9	24	LOCAL MEETING
NOVEMBER	24	96	LOCAL MEETING
DECEMBER	38	232	LOCAL MEETING
GRAND TOTAL	260	1201	

OCCUPANCY OF APDRTC HOSTEL FOR 1992

MONTH	NUMBER OF PERSON	NUMBER OF NIGHTS	PURPOSE
JANUARY	6	12	LOCAL MEETING
FEBRUARY	24	103	LOCAL MEETING
MARCH	7	35	LOCAL MEETING
APRIL	23	73	LOCAL MEETING
MAY	14	38	LOCAL MEETING
JUNE	2	4	LOCAL MEETING
JULY	7	37	LOCAL MEETING
AUGUST	4	13	LOCAL MEETING
SEPTEMBER	26	583	LOCAL MEETING
OCTOBER	47	1226	LOCAL MEETING, MALAYSIAN TECHNICAL COOPERATION PROGRAMME(MTCP) (22)
NOVEMBER	42	292	MTCP(20)
DECEMBER	40	157	LOCAL MEETING, ASEAN COURSE (6)
GRAND TOTAL	242	2573	

OCCUPANCY OF APDRTC HOSTEL FOR 1993

MONTH	NUMBER OF PERSON	NUMBER OF NIGHTS	PURPOSE
JANUARY	20	620	ASEAN COURSE (6) ASEAN SEMINAR (14)
GRAND TOTAL	20	620	

(4) Local Running Cost of the Project

Running Cost

Item	1991	1992	Total
Equipments etc.	2,216.65 (4)	28.00 (1)	2,244.65 (3)
Consumption	6,016.65 (12)	1,302.75 (6)	7,319.40 (10)
Transportation	575.27 (1)	2,674.72 (13)	3,249.99 (5)
Traveling	842.10 (2)	911.29 (4)	1,753.39 (2)
Communication	8,131.80 (17)	1,069.00 (5)	9,200.80 (13)
Printing	126.00 (1)	0.00 (0)	126.00 (1)
Rental	716.00 (1)	297.00 (1)	1,013.00 (1)
Employment	19,726.66 (40)	8,753.10 (41)	28,479.76 (40)
Conference	7,594.42 (15)	4,227.76 ((19)	11,822.18 (17)
Others	3,314.32 (7)	2,048.90 (10)	5,363.22 (8)
Total	49,259.87	21,312.52	70,572.39

Research Fund

Item	1991	1992	Total
Investigation	23,147.95 (73)	13,513.69 (87)	36,661.64 (78)
Research	7,846.23 (25)	1,379.53 (9)	9,225.76 (20)
Printing	553.20 (2)	672.20 (4)	1,225.40 (2)
Total	31,547.38	15,565.42	47,112.80

Other Fund

Item	1991	1992	Total
Technical Exchange Trip	0	47,780.00	47,780.00
Publication	0	14,400.00	14,400.00
Seminar	0	4,476.60	4,476.60
Total	0	66,656.60	66,656.60
Grand Total	80,807.25	103,534.54	184,341.79

():%

JAPANESE CONTRIBUTION TO THE LOCAL RUNNING COST

Local Cost under T/C

1000 yen

YEAR	GG Local Operation Fund	GK Local Research Fund	Other Fund	Total
86/87	2,625	1,425	0	4,050
87/88	4,200	2,280	0	6,480
88/89	3,600	1,920	523 *(1)	6,043
89/90	3,400	1,800	255 *(2)	5,455
90/91	3,393	1,785	500 *(3)	5,678
91/92	2,442	1,577	0	4,019
92/93	2,982	2,008	2,822 *(4)	7,812
Total	22,642	12,795	4,100	39,537

note : Year 92/93 is budget, other years are expenditure

*(1) Technical Exchange Trip

*(2) Technics Extension

*(3) Technics Extension

*(4) Technical Exchange trip(2,102), Technics Extension(720)

ANNEX 9

Report on the Technical Exchange Trip to ASEAN Countries

REPORT ON THE TECHNICAL EXCHANGE TRIP TO ASEAN COUNTRIES

2 AUG - 15 AUG 1992

I. Background

The initial technical cooperation and third country training projects of the APDRTC which started in 1986 have completed. The project is now in its two-year extension period for the technical transfer and another five years for the third country training programme.

To date, 28 Japanese experts have spent some time at the Centre to transfer new techniques to the Malaysian scientists and 25 Malaysians (officers and technicians) had undergone training in Japan. Five seminars have taken place and three training courses (two on Basic Diagnostic Techniques and one on Specialised Diagnostic Techniques) have been offered to over 100 people from the ASEAN countries.

II. Objective

Six years have passed ever since the preliminary studies made by the Japanese prior to the commencement of the project. Changes have certainly taken place during the years and it was felt that the current trends and needs of the member countries require reviewing. This was also suggested by the project evaluation team in 1990 as a prerequisite in planning future research and training programmes.

The reasons for the technical exchange trip are as stated below:

1. To exchange notes on the current scenario of the poultry industry as a whole and the poultry diseases in particular.
2. To gather information on the training needs of the ASEAN member countries so that planning can be coordinated in a manner that will benefit all members concerned.
3. To gather opinions and suggestions for the future role of the Centre.
4. To establish contacts so that interactions among scientists will be enhanced.

III. Members of the team

1. Dr. Chikara Kuniyasu - JICA Expert Team Leader
2. Mr. Shigeyuki Oya - JICA Coordinator
3. Dr. Nor Aidah Bt. Abdul Rahim - Director, APDRTC

4. Dr. Mahani Abdul bt. Hamid - Head, Pathology Unit, APDRTC
5. Dr. Wan Kamil b. Wan Nik - Virologist, APDRTC
6. Dr. Sharifah bt. Syed Hassan - Virologist, VRI

IV. Places visited

Thailand

1. Department of Livestock Development (DLD), Poultry Division (3 Aug)
2. National Animal Health and Production Institute (NAHPI) (4 Aug)

Philippines

1. Philippine Animal Health Centre (PAHC) (5 Aug)
2. National Animal Disease Diagnostic Laboratory, Quezon City (6 Aug)
3. International Training Institute for Pig Husbandry, Lipa City (6 Aug)
4. Regional Animal Disease Diagnostic Laboratory, Lipa City (6 Aug)

Brunei

1. Department of Agriculture (8 Aug)
2. Veterinary Laboratory, Kilanas (8 Aug)

Indonesia

1. Veterinary Drug Assay Laboratory, Bogor (10 Aug)
2. Animal Disease Research Institute, Bogor (10 Aug)
3. Disease Investigation Centre, Denpasar (13 Aug)

Singapore

1. Central Veterinary Laboratory, Ponggol (15 Aug)
2. SPF Unit, Veterinary Research Institute (15 Aug)

1. POULTRY INDUSTRY

1.1 THAILAND

An important livestock industry. Self sufficient and exports to Japan, Hong Kong, Singapore and Germany. Large commercial farms form the main source of chickens while backyard chickens form a small proportion of the whole industry.

The Department of Livestock Development (DLD) is involved in animal health and the Poultry Division (at Bangkok) provides extension and diagnostic services to the poultry industry. There are three other diagnostic laboratories in the country situated in the north, north-east and south. The private sector is also involved in similar services.

Common diseases encountered are ND, IBD, fowl cholera, fowl pox, mycoplasmosis, CRD and DVE in ducks. Vaccinations with locally produced and imported vaccines are carried out as prevention and control measures. The locally produced vaccines are Newcastle (F strain), Newcastle (MP strain), IB, fowl pox, duck plaque and fowl cholera.

1.2 PHILIPPINES

The poultry subsector is a major contributor to the total agricultural output of the country. About 80% of the poultry population is in backyard farming whilst the remainder is in the commercial farms. Similarly in ducks, the majority (88%) are in backyard production.

There are thirteen (12 regional and 1 national) diagnostic laboratories with seven of them in Luzon. Animal health matters are mainly the responsibility of the government.

Problem diseases are ND, IBD, CRD, parasitism (coccidiosis and leucocytozoonosis) viral arthritis, malabsorption syndrome, fowl pox and fowl cholera. Vaccinations are practiced to control and prevent diseases. Local vaccines produced are ND and fowl pox.

1.3 BRUNEI

Poultry production is the only active livestock industry in the country as compared to the food animals. The target is self sufficiency by 1996. Egg consumption has stabilised at 60 million and there are no plans to expand.

Fertilised eggs are imported from Malaysia and hatched in the country for distribution to the farmers. Previously day-old chicks were imported from Malaysia but that has stopped in an effort to cut costs and increase profit margin. Most farms are small and there are projects run by young farmers (quite similar to the graduate farmers in Malaysia).

The government has free access to all the farms and possesses records of all farms. The emphasis is on production and farm management for they believe that with good management there would be no health problems.

The current disease problem is IBD with others such as ND, CRD, coccidiosis and fowl pox just as important. Control of diseases is by vaccination and weekly visits to the farms.

1.4 INDONESIA

The commercial poultry industry is the fastest growing segment of the livestock sector and provides for a major proportion of the eggs and broiler meat consumed by the people. The village chickens are also important as they are preferred by consumers both for eggs and meat.

In a country where there are many islands, the disease patterns differ considerably from place to place. Diagnostic services are provided by Disease Investigation Centres which serve for the farmers and field veterinarians. There are three types of laboratories; A, B and C. The A type (seven of them in the whole country) laboratories are reasonably well equipped and capable of providing diagnostic services in the region.

Diseases of importance are ND, Mareks, IB, IBD, fowl pox, ILT, CRD, coryza, pullorum, fowl cholera and coccidiosis. Vaccines against ND, fowl pox, EDS and CRD are produced locally while the others are imported.

1.5 SINGAPORE

Poultry farms are resettled in areas called agrotechnology parks. The farms are large and emphasis is on layer farming and duck broiler production. The country is currently 40% self sufficient in egg production and aims to be 80% self sufficient.

The Primary Production Department (PPD) provides veterinary field services to the poultry industry through the Veterinary Treatment Centres. The main services provided are clinical diagnosis, treatment, vaccination and extension. Poultry farmers have direct contact with the government. Confirmation of disease is carried out by the Central Veterinary Laboratory.

The country remains free from the major poultry diseases such as fowl plague and duck virus enteritis. ND and IB are still encountered occasionally but unlike the other ASEAN countries, IBD is not a problem.

Monitoring of flocks for *S. enteritidis* is carried out every month and a system of inspection for checking drug residues in meat and eggs are being formulated.

2. BRIEF NOTES ON PLACES VISITED

2.1 THAILAND

2.1.1 Poultry Division, Department of Livestock Development, Bangkok

This division is situated in Bangkok and is the only laboratory in the country that deals entirely on poultry health. There are six veterinarians and seven technicians. Two of them have attended either the seminar or courses held at the APDRTC.

The laboratory is divided into the bacteriology, pathology, virology and parasitology sections. Only basic laboratory tests are carried out. Facilities in terms of equipment are lacking and techniques taught at APDRTC could not be applied because of this short-coming. An average of 30 -40 cases are handled monthly.

2.1.2 National Animal Health and Production Institute, Bangkok

The Government of Japan provided grant aid and technical cooperation for the institute. It is now in its seventh year of the project. It serves as a national veterinary diagnostic centre for animal diseases and animal production, a training centre for technicians and personnel concerned with animal health and production as a national livestock information centre.

There are 86 researchers working in pathology, virology bacteriology, parasitology, immuno-serology, toxicology and biochemistry and epidemiology. The sections are well equipped and there are several research projects going on. The staff have been trained in Japan and a significant number have postgraduate qualifications. Only one of the officers have been to the APDRTC to attend a seminar.

2.2 PHILIPPINES

2.2.1 Philippines Animal Health Centre (PAHC), Quezon City

This is a UNDP-FAO assisted project of the Bureau of Animal Industry and acts as an animal disease research institution and reference centre. Main activities are surveys, researches, disease investigations in the field and training.

The Centre is well staffed with 22 permanents and 78 contractuels. There are seven technical sections: Bacteriology, Virology, Parasitology, Pathology, Pharmacology and Toxicology, Theriogenology and Training and Information. The Epidemiology section has recently been created.

Equipment is adequate and a number of research programmes are on-going.

Postgraduate training for veterinarians is conducted jointly with the University of Philippines whereby a number of them are pursuing their master degrees. Lectures are given at the centre by the university staff.

2.2.2 National Animal Disease Diagnostic Laboratory, Quezon City

As the name implies, this laboratory provides diagnostic services to areas around it. There is a total of 29 staff of whom ten are veterinarians. The laboratory will soon be closed and equipment and staff will be transferred to the PAHC.

The sections functioning are bacteriology, parasitology, virology and pathology. They are fairly equipped to carry out basic diagnostic work.

2.2.3 Regional Animal Disease Diagnostic Laboratory, Lipa City

The laboratory is a smaller version of the above but is under the jurisdiction of the region. The total manpower is 10 with a veterinarian in charge.

Bacteriological, serological, parasitological and gross pathological examinations and extension services are provided by this fairly equipped laboratory.

2.3 BRUNEI DARUSSALAM

2.3.1 Veterinary Laboratory, Kilanas

The only laboratory of its kind in the country. Very low priority is given to laboratory services since the emphasis is on good farm management. However, the laboratory is well equipped but lacks manpower.

There are only two veterinarians working in the country engaged mainly in field services and both are expatriates. No veterinarians work in the laboratory.

The main disciplines such as bacteriology, parasitology, histopathology, virology and biochemistry are present.

2.4 INDONESIA

2.4.1 Veterinary Drug Assay Laboratory, Gunung Sindur, Bogor

The laboratory was set up in 1985 with grant and aid from the Japanese government. The project has been extended for another five years (1992 - 1997). The main activities are retesting vaccines and drugs that are to be sold in the market. They are first registered and then assayed in the laboratory before certified safe for use. The procedure takes about 5 months to a year to complete. About 500 samples are tested each year.

Facilities are good and adequate. There is a total of 97 staff of whom 25 are veterinarians who have all been trained in Japan.

2.4.2 Animal Disease Research Institute, Bogor

This is the central laboratory where the main activity is research. It is also the reference centre for all the other disease investigation centres.

Researches are done in collaboration with other countries such as Scotland and Australia. Work on MCF, arboviruses and anaplasmosis, besides others are currently carried out.

The Institute is adequately equipped and well staffed with a number of officers away on postgraduate studies.

2.4.3 Disease Investigation Centre, Denpasar

This is a type A laboratory with disease investigation diagnostic services and research on Jembrana disease as its main activities. It also provides training for Indonesian veterinarians and assistant veterinarians. Ninety percent of the specimens examined are poultry.

There are eight veterinarians (four of them are working on their master degrees on Jembrana disease) and 18 veterinary assistants. The laboratory is adequately equipped and staffed. Testing techniques are quite advanced especially on Jembrana disease.

2.5 SINGAPORE

2.5.1 Central Veterinary Laboratory, Ponggol

This laboratory services the livestock sector particularly in disease investigation and monitoring. Research is also carried out at this place. Being a country that has few disease problems, monitoring is a major portion of its activities.

The laboratory is well equipped and staff are well trained although they may not be adequate in number. There is a total of 37 staff with only two veterinarians. All services are charged and the officers often visit farms in Malaysia as part of their monitoring programme on imports of pigs and poultry for slaughter in the Republic. They produce their own SPF eggs which are also sold to others who need them.

3. REQUESTS AND SUGGESTIONS BY THE ASEAN COUNTRIES

3.1 TRAINING & SEMINARS

3.1.2 Thailand

- * Does not anticipate the possibility of sending their paraveterinarians (technicians) for the course on Basic Diagnostic Techniques (BDT) at the APDRTC because of the English examination that they have to pass as part of the requirement to qualify before application can be considered by the Thai government. Suggested that the course on BDT be scrapped and the course on Specialised Diagnostic Techniques (SDT) be of a longer duration - between 2 to 3 months.
- * Requested for a course on fluorescent antibody techniques in diagnosis.
- * Suggested that participants selected for future seminars should be restricted to people related to the field so that discussions on common topics be more meaningful.

3.1.2 Philippines

- * Do not need the BDT course because of the in-house training that they conduct.
- * Suggested that the SDT course be of a longer duration - 2 to 3 months. Training on production of antigens and antiserums very much needed.

3.1.3 Brunei Darussalam

- * Not interested in the training courses of the APDRTC because they lack manpower and the staff usually go to Singapore, United Kingdom or other countries for training. They would prefer information on research findings.
- * Requested for a seminar on vaccination or diseases in breeder farms.

3.1.4 Indonesia

- * DIC at Denpasar is interested in sending technicians for training mainly for exposure since they are experienced but never had the opportunity to go for training overseas.
- * Suggested that an exchange of scientists be made in specific fields so that technology can be transferred between countries.

3.1.5 Singapore

- * The BDT course should preferably be for trainers so that they will be able to train the technical staff and thus more people would benefit.
- * The SDT course should not exceed four weeks as they could not afford to release their officers for long periods.

Specific training needs are:

1. Typing of IB strains
2. DVE - diagnosis and preparation of antigens
3. PCR technique

- * Annual forums for scientists of common fields should be held in place of seminars so that there can be an exchange of research findings and ideas.
- * Member countries should be informed of the presence of experts at the APDRTC so that those interested may be able to work together with the experts.

3.2 FUTURE ROLE OF APDRTC

The opinions of the ASEAN members on the role of the APDRTC in the future were sought. Some of the comments made were that the APDRTC should be the:

- * Supplier of biologics such as antigens, antiserums and SPF eggs. The Philippines wanted a constant supply of SPF eggs for their research work. Thailand and Brunei also indicated their needs for SPF eggs.
- * Centre of excellence for poultry disease research
- * Data bank for the region
- * Reference centre for specific tests such as phage typing of *S. enteritidis*
- * Coordinating centre for standardisation of methodologies such as the ASEAN standards for poultry vaccines and evaluation of new products. The APDRTC should then disseminate information to member countries.

- * Coordinator for the decentralization of antigen production by identifying specific countries for specific antigen production.

4. SUMMARY

The objectives of the trip were achieved and it certainly was a very good exposure for all the members of the team. It provided opportunities for us to see the different capabilities and understand the constraints of each country. One of the achievements was the contacts made with the relevant people who are directly involved in research.

Matters that need to be considered based on the discussions held could be summarised as:

- * The training courses need to be tailored in a manner that would be practicle for the participants to adapt when returning to their countries because of the lack of facilities in some of the countries.
- * The need for the course on BDT requires reviewing since almost all the countries viewed it as unnecessary. The SDT course on the other hand needs to be lengthened.
- * There seems to be an immediate need to hold courses on the production of antigens and antiserum for use in diagnostic tests.
- * IBD is a common problem in all the countries except for Singapore. A seminar on the disease would perhaps be useful to everyone concerned.
- * Dissemination of information on research findings or other technical matters should be done on a regular basis so that advancements or achievements in poultry disease research in the region is made known to all member countries. The APDRTC should act as the coordinator for such activities.

5. ACKNOWLEDGEMENT

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10 Sept. 1992

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6. Mrs. Koh-Yeo Swee Chear - Senior Lab. Technician, Virology
7. Mr. Teo Thiam Peng - Senior Lab. Technician, Bacteriology

ANNEX 10

Malaysian Contributions

Malaysian Contributions

(1) Allocation of Malaysian Staff (APDRTC STAFF)

DR. GAN CHEE HIONG	DIRECTOR , VRI, DVS, MOA
DR. NOR AIDAH	DIRECTOR , APDRTC, VRI, DVS, MOA
<i>Office</i>	
MRS. NORAZIAN	TYPIST
MRS. KHADIJAH	JUNIOR CLERK
MRS. SURAYA	WORKER
<i>Virology Section :</i>	
MR. LIM KEAN TEIK	RESEARCH OFFICER
DR. WAN MOHD. KAMIL	VETERINARY OFFICER
MDM. LIM SEIW SAM	LABORATORY ASSISTANT
MDM. CHEAH NGAN YOKE	LABORATORY ASSISTANT
<i>Bacteriology section :</i>	
* MRS. ZAINI BT. MOHD. ZAIN	RESEARCH OFFICER
MDM TAN LIN JEE	LABORATORY ASSISTANT
MRS. NOR AZIZAH	VETERINARY OFFICER
<i>Parasitology section :</i>	
* DR. RAHMAT BIN S.M. SHERIFF	VETERINARY OFFICER
MR. PARAMESWARAN	LABORATORY ASSISTANT
<i>Pathology section :</i>	
DR. MAHANI BT. ABD. HAMID	VETERINARY OFFICER
MR. YAP HON CHOONG	EXPERIMENTAL OFFICER
MR. GANESAN	LABORATORY ASSISTANT
MRS. ZURAI DAH	LABORATORY ASSISTANT
<i>Epidemiology section :</i>	
* DR. ABD AZIZ BIN JAMALUDIN	VETERINARY OFFICER
DR. NAHEED	ASSISTANT VETERINARY OFFICER
MDM. TAN CHOONG LIAN	VETERINARY ASSISTANT
MR. MAGENDRAN	LABORATORY ASSISTANT
<i>SPF Chicken house and Feed mill</i>	
MR. LIP KIM LOCK	VETERINARY ASSISTANT
MR. PETER MANGALAM	VETERINARY ASSISTANT
MR. KORANDASAMY	WORKER
<i>Experimental chicken house</i>	
MR. ASRI	WORKER
<i>Glassware washing room</i>	
MR. SHAHRIL	WORKER
MRS. FAUZIAH B	WORKER
MISS. JALILAH	WORKER
MR ZAHARI	WORKER
<i>JICA</i>	
DR. CHIKARA KUNIYASU	TEAM LEADER (562999)
MR. SHIGEYUKI OYA	PROJECT COORDINATOR (543775)
MISS SHANITA	SECRETARY (262451)

Note : * They left for post-graduate studies.

(MRS. ZAINI BT. MHD. ZAIN	28DEC '92 - 28DEC '94)
(DR. RAHMAT BIN S.M. SHERIFF	28DEC '92 - 28DEC '94)
(DR. ABD AZIZ BIN JAMALUDIN	AUG '89 - DEC '94)