

(1) 討議議事録

Summary Record of the discussions between the Japanese Follow-up Team and Dr. S.N. Saxena and other Officers of Central Research Institute, Kasauli, from 10th to 13th June, 1984

The Japanese Team comprised of the following:-

1. Dr. Akira Oya (Leader), Director, Virology and Rickettsiology Department, National Institute of Health.
2. Dr. Isao Yoshioka, Kitasato Institute
3. Dr. Hajime Nakamura, Director, Research Department, Nippon Institute for Biological Science.
4. Dr. Yoshinao Tsunehisa, Manager, Biological Product Department, Takeda Chemical Industries Limited.
5. Dr. Kazushige Masuda, M.D., PH.D. Deputy Director, Biological and Antibiotics Division, Pharmaceutical Affairs Bureau, Ministry of Health & Welfare.
6. Mr. Hiroshi Kato, Staff, Medical Cooperation Department, Japan International Cooperation Agency (JICA).

Background

An agreement was signed between the Government of India and the Government of Japan for production of Japanese Encephalitis Vaccine at Central Research Institute, Kasauli, in March, 1982. A tentative schedule for implementation of the Project was drawn which was subject to the availability of budget and change within the scope of the record of the discussions at a future date.

Some practical difficulties have been encountered in the implementation of the Project since the signing of the agreement in the shape of fulfilment of mandatory procedures whether for import of equipment, modification of buildings, provision of

men, material and machinery or training of personnel abroad, necessitating rescheduling of the Project from the practical angle.

This necessitated the visit of the present team to the Institute.

The following issues were discussed and deliberated upon:-

1. Progress of remodification of buildings, Electrical Installation etc.

(i) Final Product Division

The team expressed their satisfaction on the modifications carried on in the buildings ear-marked, which they found according to the specifications and requirements.

(ii) Bulk and Quality Control Division

The team showed concern for non-construction of Boiler-cum-Compressor Room and re-inforcement of the floor for K-2 Zonal Centrifuge. They were informed that Administrative Approval and Financial Sanction for the work have since been issued by the Ministry of Health & Family Welfare. The Central Public Works Department have not only issued notice for inviting Tenders but have finalised the Tenders and awarded the work to a Contractor. Unfortunately, however, because of unrest in the neighbouring areas, the Contractor could not take up the construction and that this year we faced an abnormal scarcity of water which is an essential element for taking up any construction work. Same was the case with the re-inforcement of the floor for K-2 Centrifuge. However, with the onset of rains, the position of water shall be eased and with the normalcy coming in the adjoining area, the Contractor shall be able to bring in the men and material for taking up the construction and an assurance has been given that the work will be completed by 30th of August, 1984.

2. Damage to equipment/chemicals in transit/loss of  
Chemicals in the fire in the Stores of Bombay Port Trust.

(i) Equipment

During transportation of the equipment from Bombay Port to Kasauli, some equipment was damaged. The fact was reported to JICA, the Insurance Company, the Directorate General of Health Services and the Ministry. In order to assess the damage, a Survey Team from Japan visited India from February 18th to February 25th, 1984. They also visited the Institute, examined the equipment in detail and gave their report. In the final round of talks with the Japanese Team, the representatives of the Insurance Company were also associated. A copy of the Report was also sent to the Insurance Company on 28th of February, 1984. The major equipment damaged in the Freeze Drying Machine. The Insurance Company found that M/s. Edwards Alto Vuoto of Italy who supplied this Machine were represented in India by M/s. Lawrence & Mayo (India) Pvt. Ltd., and requested them to send their representative to the Institute, for examining the damage to the equipment and submit their report. To expedite the matters, we took up the case with the Insurance Company for repair/replacement of the damaged equipment. The Insurance Company agreed that we may write to the Manufacturers of the various equipment damaged and ask them to submit the proforma invoice for new equipment. Three Companies who supplied the equipment which suffered damage in transit have already been addressed to send the proforma invoice. These companies are -

(1) M/s. Edwards Alto Vuoto S.P.A., 20090 Trezzanu S/N (Milano) - via Carpaccio 35 (Italy); (2) M/s. Marubeni Corporation, 4-2, OH Temachi 1-Chome, CHIYODA-KU, Tokyo (Japan): and (3) M/s. Electro Nucleonics, Inc., 368 Passaic Avenue, Fairfield,

New Jersey-07006 (USA). Copies of these communications were sent under Registered Cover to the Ministry of Health & Family Welfare, Coordinator, JICA, Embassy of Japan in India, the Surveyor appointed by the Insurance Company, the Branch Manager of the Insurance Company, the Divisional Managers of the Insurance Company. Negotiations with the Insurance Company will be carried on on the basis of the proforma invoice received from the aforesaid Companies.

(ii) Chemicals

Ten cases of chemicals/drugs were received at Bombay on 'Adelphiymelosh'. Eight cases containing freon gas and formaide are reported to have been destroyed in a fire which broke out at Hajibandar of Bombay Port Trust. A letter certifying the burning out in the fire accident has been issued by the Trust to our Shipping Agents, a copy of which has been forwarded by them to the Assistant Director (Shipping), Directorate General of Supplies and Desposals, Bombay, which has been received by us also (copy at Annexure I). It was the opinion that this letter should be a testification enough for the fire and the damage caused to the consignments and hence the Insurance Company in Japan who undertook the insurance should replace. Mr. Hiroshi Kato of Medical Cooperation Department, Japan International Cooperation Agency who formed a Member of the team, assured that he will try in this direction.

Nine cases containing Bovine Serum, Calf Serum, Earle etc. arrived by air at New Delhi were insured by JICA with Sumitomo Marine and Fire Insurance Company limited, Tokyo from Tokyo to New Delhi. An official was sent to Delhi to take delievery and bring them to Kasauli after insurance by an Indian

Company from Delhi to Kasauli. When delivery was taken at Delhi, some cartons were found to have been damaged. The damaged cartons were, thus, not insured by the Company, who undertook the insurance of intact cartons alone, from Delhi to Kasauli. Mr. Hiroshi Kato of Medical Cooperation Department of JICA and Member of the Japanese Team inspected the damage at Kasauli during this visit. The Directorate General of Health Services, the Government of India, New Delhi had taken up the matter with the Coordinator, JICA, Embassy of Japan in India, New Delhi, demiofficially on the 11th January, 1984. Mr. Kato after inspection, was of the view that the Japanese Insurance Company should replace the damaged chemicals on his report.

3. Clearance for import of items to be supplied by the JICA in 1983.

Before any equipment, chemical, machinery etc. could be imported in the country, a Certificate to the effect that the same is/are not available indigenously, has to be obtained from the Director General of Technical Development of the Govt. of India. The machinery which was to be imported in 1983 is pending the issue of this Certificate for which relentless efforts are being made at our end as also the Directorate General of Health Services of the Government of India. Even Officers of the Institute have been deputed to pursue from time to time. Lately the Directorate General of Technical Development had sought classification of the equipment/machinery which was to be imported in 1983, asking which of the items are spares of machinery etc. already received and the new items and their spares etc. Further the list of the items which are consumables. The information has since been supplied and it is felt that the

clearance will be issued soon and if necessary, an Officer of the Institute will be deputed to Delhi who with the help of the Directorate General of Health Services and the Ministry of Health, shall pursue the case to its finalisation.

4. Equipment to be imported in 1984

The Japanese Team had brought with them a list of equipment which is to be imported for the Project in 1984. Dr. Akira Oya, the Leader of the Team observed that a number of Indian Scientists have visited Japan and its Institutes and taken training there. They should examine the list vis-a-vis their requirements for the Project in India and modify the list, if necessary, by deleting certain items which might be available in the Institute/ in India and add the ones they would need. The list has been examined and with minor changes is annexed (Annexure II) for consideration by JICA, Tokyo.

5. Mice Production

Dr. Akira Oya then enquired about the progress of the production of mice which will be needed on massive scale for production of the Vaccine. He was informed that we have already started production of breeder in ten rooms in our Specific Pathogen Free Laboratory Animals Colony for rearing breeders. Another ten rooms will be added after suitable intervals and that we shall be able to produce 7,000 mice in September-October, 1984; 12,000 mice in January, 1985; 16,000 mice in April, 1985 and 20,000 mice in July, 1985. Further enhancement in production will be undertaken as per the requirements of the Project and at a rate of 4,000 additional mice per quarter.

6. Deputation of Japanese Experts for installation of equipment and Test run

(a) The suitable periods and time for deputation of the Japanese Experts to the Institute, for installation of the equipments was then discussed. The time of their visit, the duration of their visit, the purpose for which they will be coming, was gone through and is indicated in the detailed schedule of installation of the equipment (Annexure III).

(b) Schedules at Annexure IV & V indicate the jobs to be carried by the Institute to provide requisite infrastructural facilities between July to December, 1984.

7. Deputation of Japanese Experts for Vaccine Production and Quality Control

It was agreed that two experts may come for Bulk Production for three months from March/April, 1985.

One expert should visit for Quality Control for three months from May/June, 1985.

The question of installation of Freeze Dryer, the deputation of Engineers for its installation and the experts for the final Product Division, was deferred for consideration at a later date.

8. Deputation of Central Research Institute Personnel for Training in Japan

(a) During 1984, three personnel (two for Bulk Process and one for Quality Control) to be deputed for training for three months, (each preferably between August to October, 1984).

(b) During 1985, three personnel (one for Quality Control for three months and two for final product for two months each) be deputed, preferably between July to October, 1985.

9. It was also agreed that the Institute will send fortnightly progress reports to Coordinator, JICA, Embassy of Japan in India, so that the deputation of Experts from Japan can be arranged on time.



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20th February, 1984

The Asstt. Director (Shipping)  
Directorate General of Supplies and Disposals  
Sapt Bldg., J. N. Heredia Marg.  
Ballard Estate  
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Dear Sir:

M.V. "ADELPHI YEMEOS" v. 4 of 11.10.83  
IGM NO. 1531 - ITEM NO. 100  
B/L No. 45-101 Yokohama/Bombay  
8 Cases Chemicals

We are in receipt of your letter No. BOM/SHIP/A/WBC-  
178 HH/1-22 dated 7th instant, regarding 8 cases  
short received by you and enclose herewith a photostat  
copy of letter dated 18.2.84 received from the Bombay  
Port Trust, which is self explanatory.

Yours faithfully,  
INDIAN MARITIME ENTERPRISES PVT. LTD.

DIRECTOR.  
AS AGENTS.

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Dock.

-Princes & Victoria-

18-2-84

Bombay, 19-2-1984

To,

M/s. Indicine Maritime Enterprises

Dear Sirs,

Private Ltd, 406 Emea House

No. 1, 8 Cases 4th Floor, 245 S. B. Singh  
B.L. P.L. Road Bombay

Mr. D. D. Adelphi Yemelos 400001

I. O. M. No. 1531 of Item No. 106

Date 11-10-83

Your reference No. A/1531/106 date 15-2-1984

I have to inform you that 8 cases under

Mark reference were landed at Haji Bunder on 8-11-83 and same were stored in N/shed these cases were

a. & 10-1- involved in fire  
b) and destroyed  
c) on 24-12-83

Yours faithfully,  
A/18/12  
Asst. Manager,

C. D. O.  
A. D. M. & K. Das

VOK  
18/2/84

## ANNEXURE II

I. List of items required for bulk production in 1984

Serial No.	Description	Quantity	Remarks
<u>A. Equipments</u>			
1.	Homogeniser, Capacity 3L --10L	1 No	
2.	Homogeniser for Sucrose Solution, Capacity 50L	1 No.	
3.	Autocounter equipment	1 No.	
4.	Stainless Steel tanks Capable of withstanding 1kg/cm <sup>2</sup> pressure		
	<u>Capacity</u>	50 L	2 Nos
		38 L	2 Nos
		20 L	2 Nos
5.	Continuous dispersar, 0.5ml	2 Nos	
<u>B. Spares for existing equipment</u>			
1.	HITACHI 6PR-52 Centrifuge parts:-		
	(i) Recommended two year normal maintenance spares	4 sets	
	(ii) Carbon brushes	24pairs	
	(iii) Drive motor	2 Nos	
2.	K-II zonal Centrifuge parts; Recommended two year normal maintenance spares.	1 Lot	
3.	Spare parts for automatic syringe	1 Lot	
<u>C. Consumables</u>			
1.	Water supply bottles(polycarbonate) with rubber stopper, metal end pipe and aluminium cap.	1000Nos	
2.	Virus inoculating injector 2 ml Capacity, Semi-automatic	50 Nos	
3.	Silicone tubing:		
	20 mm	50 M	
	12 mm	50 M	
	8 mm	50 M	
	6 mm	50 M	
	4 mm	50 M	

-CONTD-

Serial No.	Description	Quantity	Remarks
4.	Silicone plugs of varying sizes	20 each	
5.	Pads for millipore filter		
	Pre	125 Nos	
	RA	125 Nos	
	HA	125 Nos	
	PH	125 Nos	
6.	Parchment paper	1000 Nos	
7.	Polypropylene bottles, Capacity 1.0L for 6PR-52 centrifuge	100 Nos	
8.	Y- Shaped connectors, large	12 Nos	
9.	- - - Ditto - - - but small	12 Nos	
10.	3 Way connector, Large	12 Nos	
11.	- - - Ditto- - - but small	12 Nos	
12.	Air Filters	5packs	

D. Chemicals

1.	Neutral Soap	200 kg	
2.	Protamine Sulphate NBC	5 kg	
3.	Calf Serum (free from JE antibodies)	5 L	
4.	Hibitane glyconate Solution (Disinfectant)	50 L	
5.	Gelatin	1 kg	
6.	Sodium glutamate	1 kg	
7.	Medium 199	100 L	
8.	Paraformaldehyde	10 kg	

II LIST OF EQUIPMENT FOR 1984  
 QUALITY CONTROL. J.E. VACCINE PRODUCTION

DESCRIPTION	QUANTITY	REMARKS
<u>A. EQUIPMENT</u>		
1. Small size Refrigerater	1	05 pp - 22
centrifuge	1	05
ROTAR	1	C
Assembly	1	D
Tube (500ml)	5 Pair	500pp 4 x 1 set
2. Autoclave model SD-30 N Automatic	1	
3. Chemical Balance	1	For microanalysis Final Reading 0.001mg
4. Micro plate washer	2	
5. Micromixer	2	MX - 4
6. Titer teck		
Multichannel pipette	2	77-828-00
Tip carrier	2	61-210-00, 0.005~0.200ml
pipette tip(single)	4	77-890-07, 0.003~0.200ml
		500x1 PK
7. Eppendorf pipette	1	4710, 10-100 $\mu$ l
pipette	1	4720, 1-100 $\mu$ l
camphor tips	2	1-100 100 x 1
combination tips	2	0.5ml, 100 x 1
	2	2.5ml, 100 x 1
	2	12.5ml, 100 x 1
8. Pocket computer	1	FX-602p
cassette interface	1	FA-2
mixing charactoer	1	FP-10
9. Filtering apparatus		
Pressure tank	1	10L, XX6700P10
	1	20L, XX6700P20
Filter	4	HAMP 29325, 25x1
	4	GSMP 29325, 25x1
	4	AP 15293 25x1

II LIST OF EQUIPMENT FOR 1984  
 QUALITY CONTROL. J.E. VACCINE PRODUCTION

No.	DESCRIPTION	QUANTITY	REMARKS
10.	Plastic multiplate Falcon	5 10	3047, 50× 3046, 50×
11.	Gas Pressure adjuster for nitrogen cylinder	1	
12.	Ultra Sonic cleaner	1	
13.	clean racks for mice.	2	
14.	Ethylene oxide sterilizer with cylinder	1	
<u>SPARES FOR EXISTING EQUIPMENT</u>			
15.	Parts for refrigerated centrifuge 6PR - 52		
	Pack	1	
	Tube	1	1000PP. 6×1
	Carbonbrush	4 Pair	
	Motor	1	
	Other recommended 2 year normal maintenace Spares		
16.	Transformer. 230 volts to 110 volts	2	
17.	Recommended 2 year normal maintenace spares for CO <sub>2</sub> incubators		
18.	Parts for Ion exchanger as per recommended list for 2 year normal maintenace		
	Resin		IRA: 410 IR: 120 B
19.	Air filter	12	

No.	DESCRIPTION	QUANTITY	REMARKE
<u>Consumables</u>			
20.	Rubber Stopper No. 1	200	7542
	2	200	"
	5	200	"
	8	200	"
	11	200	"
	16	200	"
21.	High Sac <sup>1</sup> - polycarbonate paper bags, autoclavable		
22.	Silicon plug, (test tube stopper) Spongy, autoclavable		
	Lower diameter 13mm	400	
	15mm	500	
23.	Sulfuric acid paper - autoclavable	200	Sheets
24.	Seal film test tube	6 Pkts.	
25.	Indicator tapes for sterilization	12 Pkts	14mm x 20mm
26.	Rubber Stopper with filter Autoclavable for bottles	100	
27.	Aluminium foil 30m	30	
<u>Glasswares</u>			
28.	Syringe for continuous disperser 1 ml	20	
	2 ml	20	
	10 ml	20	
29.	Digestion Flask.	5	304, 500ml
30.	Petridishes	200	153D, d:70mm
31.	Bottles, Large Roux bottles	100	321
	ordinary (small)	200	"
	Square bottles	200	"
	Plaque bottles(20g)	200	"

No.	DESCRIPTION	QUANTITY	REMARKS
	Culture media, Serum Etc.		
	Earle	500l.	GB450-1100-1
	Eagle Mem	100l.	GB410-1100-1
	Trypsin	12 Pk	Wako.523-00922DF 25g
	Neutral red	2 Pk	528-00472DF. 25g
	Yeastlate	1 Pk	521-01001DF. 100g
	Lactalbumin Hydrolysate	2 Pk	530-00835, 500g
	Agar	50 Pk	Difco Noble 1/4 lb
	Penicillin		10 <sup>8</sup> units
	Streptomycin	300 g	
	Bovine albumin	3 Pk	Fraction V.50g/Pk
	Thioglycolate medium	10Pk	
	Sabouroid media	10Pk	
	PPLO media		
	Broth	10Pk	
	Agar	10Pk	
	Horse Serum fraction	10	6x20ml



III LIST OF EQUIPMENT FOR 1984

FINAL PRODUCTS DIVISION—JE VACCINE PRODUCTION

SPARE PARTS FOR EXISTING EQUIPMENTS	quantity
spare parts for Ion Exchanger	
i) Resin for Ion Exchanger	one charge
1RA 410	
1R 120B	
ii) Filter	6
iii) Recommended 2 year normal maintenance spares	
2. Spare parts for Autoclaves model VC -A 202 D	
i) Recorder charts and Ink	6 dozen chart one dozen Ink
ii) Filter cartridge	4 pieces
iii) Main Filter	"
iv) Door Packing (Gasket)	"
v) Recommended 2 year normal maintenance spares	
3. Spare parts for Dry oven model DSP-A-6B	
i) Bearing for service for UCP 2670 HR 5	2
ii) V - belt	one dozen
iii) Special Hepa filter W - 500, H - 400, T 290	
iv) Recorder charts and Ink	6 dozen chart one dozen Ink
v) Fuse AFAC - 10 AFAC - 3 AFAC - 5	one dozen each
vi) Recommended 2 year normal maintenance spares	
4. Spare parts for Freeze dryer	
i) Pirani Gauge head controller 101 (PK 10K)	one

- contd -

SPARE PARTS FOR EXISTING EQIPMENTS	quantity
ii) Gland Packing for cooling water pump 32 x 20 x 6 45 x 25 x 9.5	one
iii) Recommended 2 year normal maintenance spares	
iv) Recorder charts and Ink	6 dozen chart one dozen Ink.
5. Spare parts for Automatic water distiller model (GS 200T)	
i) Sponge filter	4
ii) Main filter TCR045	2
iii) Rcommended 2 year normal maintenance spare	
6. Spare parts for KT automatic vial filling line	
i) Syringe 10 ml	2 dozen
ii) Syringe 5 ml	"
iii) Relay MY4N 200v 4C	6
iv) Electromagnetic valve AS - 05 N 102 200V	6
v) Belt conveyer 5m	15 meter
vi) Electoromagnetic SRcd 3931 0Th 2.2A " " " 1.2A " " " 0.72A SRca 3631 —0 200V 4a	2 each
vii) Micro Switch Z-15 GQ 22B Z-15 GW 2255B	2 each
viii) Bearing 51100 51105 51209 63202 HK 3012 NAST I7 ZZUU SSF 10- 15ZZ NAXI - 1425 IRT 710 IRT 1012	one each

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SPARE PARTS FOR EXISTING EQUIPMENTS

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quantity

TLA	1010	
TLA	1312	
606	ZZ	
6000	ZZ	
6002	ZZ	
6003	ZZ	
6004	ZZ	
6007	ZZ	
6009	ZZ	
6203	ZZ	
6204	ZZ	
6205	ZZ	
6209	ZZ	
6904	ZZ	
ix) Filter for photmagnets Switch		2
FR - 3A		
x) Valve SUS 316		6
xi) Electromagnet valve		
25 V, 4E1 - 200V		
TA 512 - S - 200		
xii) O ring Packing		6
xiii) Teflon plate		2
xiv) Spring		6
xv) Fuse		12

III FINAL PRODUCTS REQUIREMENT FOR 1984

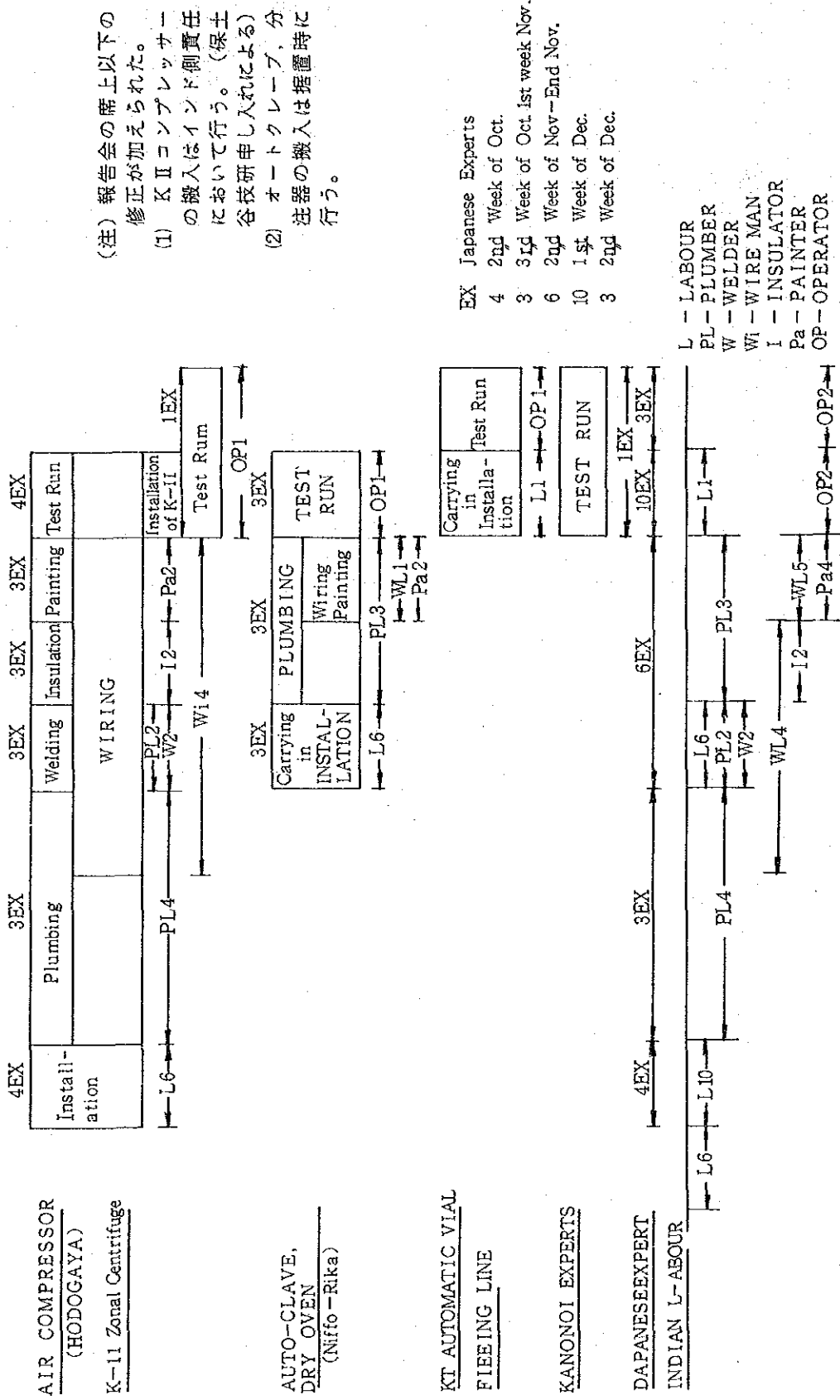
DESCRIPTION	QUANTITY	REMARKS
<u>CONSUMABLES</u>		
Cellophane wrapping paper	1000	
Parchment paper	1000	
Aluminum foil	50 mt	
Rubber gloves	4 doz	
Filter cartridge		
P/N AB/BP 7P 0.45 ~ 3.0 $\mu$ m	one doz	
P/N AB/BC 7 2.0 ~ 8.0 $\mu$ m		
Air filter	12	
Indicator for Sterilization 14mm 20mm	12 pkts	
Hibiten glyconate Solution (Disinfectant)	50 lits	
Freon 502 gas	100 kg	
Refrigeration oil	50 lits	
Rotary pump oil	20 lits	
Silicone tubing		
20 mm $\phi$	} 50 m each	
12 mm $\phi$		
8 mm $\phi$		
6 mm $\phi$		
4 mm $\phi$		

IV Miscellaneous Items

No.	DESCRIPTION	QUANTITY	REMARKS
	Dry Plain Paper Copier		
	RICOH FT 3020		
	Toner - 150 gram pack	12 pieces	
	Developer, 1kg pack (RICOH type 4000)	6 pieces	
	Silicone Oil, 200gram pack	6 tins	
	Bulb No. 54475216 B OL 385 BP 28V; 40 mA (On a P.C. Board Strip 10 Nos. connected)	02 Nos	
	Bulb No. 5447-5405 strip No. 030428 JCI - B15 24V, 4 watt (On a P.C. Board strip 10 Nos. connected)	02 Nos	
	Two year recommended normal maintenance spares	one lot	

DETAILED SCHEDULE OF INSTALLATION OF EQUIPMENT - 1984

OCTOBER				NOVEMBER				DECEMBER			
1	2	3	4	1	2	3	4	1	2	3	4



BULK PRODUCTION — TIME SCHEDULE FOR INSTALLATION OF EQUIPMENT-1984

JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DEC
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REFRIGERATED ROOM  
 RE INSULA COMP TEST  
 CONST TIONPAINT RESSOR RUN  
 1W 2W 1W

BOILER  
 BOILER ROOM  
 INSTALLATION OF BOILER  
 2W

AUTOCLAVE  
 AUTO-CLAVE (STEAM)  
 INSTALLATION AUTO-CLAVE  
 2W

COMPRESSOR FOR K-II  
 COMPRESSOR ROOM CONSTRUCTION AND FOUNDATION  
 7W

K-II ZONAL  
 Reconstruction  
 FOUNDATION  
 1W

CARRY IN AND INSTALLATION  
 TEST RUN  
 1W  
 INSTALLATION AND TEST RUN  
 2W

FINAL PRODUCT SCHEDULE OF EQUIPMENT INSTALLATION-1984

	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
<u>AUTO CLAVE</u>						
<u>DRY OVEN</u>						
<u>FILLING LINE</u>						
SERVICES						
WATER SUPPLY						
ELECTRIC SUPPLY						
RECEIPT OF BOILER						
INSTALLATION OF BOILER						
INSPECTION & TEST RUN						
CARRY IN		1W				
INSTALLATION PLUMBING RUN				1W	2W	1W
TEST RUN						1W
CARRY IN				1W		
INSTALLATION RUN						1W
TEST RUN						1W



インド国日本脳炎ワクチン製造プロジェクト修正計画

84年6月

						'85												'86													
						6	7	8	9	10	11	12	1	2	3	4	5	6	7												
協力期間																															
マウス生産						8,000/W						12,000/W						16,000/W			20,000/W										
ワクチン製造						製造開始																									
設	備	材	機	専	門	建屋改造・用役、配線、配管	2 M →	2 M →	1 M →	2 W →	2 M →	K IIゾナーナル・コンプレッサー	オートクレーブ、乾熱滅菌器	分注器	凍結乾燥機据付 (注)	2 M →															
機	専	門	家	派	遣	機械据付専門家	2 M →							2 M →	機械据付専門家 (注)																
専	門	家	派	遣	研	バルク A (生産開始指導)	2 W →	バルク	3 M →	バルク B (K II 試運転)	2 W →	バルク	3 M →	品質管理	3 M →	最終工程	3 M → (注)														
研	修	員	受	入	研	最終工程 (オートクレーブ・分注器試運転)	2 W →	品質管理	3 M →	品質管理	3 M →	品質管理	3 M →	品質管理	3 M →	最終工程	3 M → (注)	最終工程	3 M →										注：89年度の最終工程 関連の計画はすべて 暫定のものであり、最終的には凍結乾燥機の保険求償手続きの進捗如何により調整を要する。		

I. MINISTRY OF FINANCE: (DEPARTMENT OF ECONOMIC AFFAIRS)

1. Mr. S.S. Ahluwalia  
Deputy Secretary
2. Mr. C.K. Ramachandran  
Under Secretary
3. Mr. Sarup Singh  
Section Officer (Colombo Plan)

II. MINISTRY OF HEALTH: (DEPARTMENT OF HEALTH)

4. Mr. P.K. Umashankar  
Additional Secretary
5. Mr. P.R. Dasgupta  
Joint Secretary
6. Miss C. Cintury  
Under Secretary

III. DIRECTORATE GENERAL OF HEALTH SERVICES:

7. Dr. D.B. Bisht  
Director General of Health Services
8. Dr. M.D. Saigal  
Additional Director General of Health Services
9. Dr. S.K. Sengupta  
Deputy Director General of Health Services
10. Dr. K.K. Datta  
Deputy Assistant Director General of Health Services

IV. CENTRAL RESEARCH INSTITUTE, KASAULI:

11. Dr. S.N. Saxena  
Director

V. EMBASSY OF JAPAN:

12. Mr. K. Suzuki
13. Mr. H. Utsunomiya
14. Mr. Y. Nishikawa
15. Mr. H. Hiraoka

(第1回海送分)

C/Nos.	Description of Goods	Quantity
<u>(A) ZONAL, CONSUMABLE ITEMS</u>		
C/NO. 1	<u>Item No. 4</u> Needle, 10 - 15 cm long	3 pcs.
	<u>Item No. 5</u> Stainless Steel mesh, #50	4 pcs.
	<u>Item No. 6</u> Aluminium Foil, 25 cm. x 20m.	20 pcs.
	<u>Item No. 7</u> Patchment paper size: 1,016 x 762 mm	2,000 pcs.
	<u>Item No. 8</u> Kocher's Hemostatic Forceps	10 pcs.
<u>(B) BULK WORKS</u>		
	<u>Item No. 5</u> Filter Set consisting of: Pre-filter, pack of 25 pcs. ..5packs Cat. No. AP2529325 Membrane Filter, pack of 25 ..5packs Cat. No. RAWP29325 - ditto -, but Cat. No. HAWP29325 ...5packs - ditto -, but Cat. No. PHWP29325 ...5packs	1 set
	<u>Item No. 7</u> Homogenizer cap.: 5 - 100 ml. complete with standard accessories and stepdown transformer Model AM-5	1 set
	<u>Item No. 8</u> PH Meter Complete with standard accessories and electrode kit Model 501	1 set
	<u>Item No. 9</u> Abbe Type Refractometer complete with standard accessories Model III	1 set

- contd -

C/Nos.	Description of Goods	Quantity
	<u>Item No. 12</u> High Speed Autoclave max. pressure: 1.7 kg/cm <sup>2</sup> max. temp. : 127° C complete with standard accessories for use on 230V. 50Hz. A.C. Model SD-30N	1 set
	<u>(C) BULK (A) NECESSARY INSTRUMENT</u>	
	<u>Item No. 2</u> Animal Needle, 3.5 x 80 mm.	24 pcs.
	<u>Item No. 3</u> Operating Scissors, straight	50 pcs.
	<u>Item No. 4</u> Operating Knife, 16 cm. long	50 pcs.
	<u>Item No. 5</u> Continuous Dispenser, 0.5 ml. Cat. No. JS-5	1 pc.
	<u>Item No. 6</u> Silicone Tube, inner diam. : 8 mm. outer diam. : 14 mm.	50 pcs.
	<u>(D) FINAL WORKS</u>	
	<u>Item No. 1</u> High Speed Autoclave max. pressure : 1.7 kg/cm <sup>2</sup> max. temp. : 127° C complete with standard accessories for use on 230V. 50Hz A.C. Model SD-30N	1 set
	<u>(B) BULK WORKS</u>	
C/No. 2	<u>Item No. 1</u> Low Temperature Freezer cap. : 886 liters Complete with standard accessories, for use on 230v. 50Hz. A.C. Model FV-31	1 set

- contd -

(3)

C/Nos.	Description of Goods	Quantity
<u>(B) BULK WORKS</u>		
C/No. 3	<u>Item No. 3</u> Vacuum Pump complete with standard accessories for use on 230V. 50Hz. A.C. Model ULVAC PKS-030	1 set
C/No. 4	<u>Item No. 3</u> - ditto -	1 set
C/No. 5	<u>Item No. 6</u> Ice Cuber cap,: 450 kg/day complete with standard accessories for use on 230V. 50Hz. A.C. Model F-510-AWC-SB	1 set
C/No. 6	<u>Item no. 10</u> Electric Photo Colorimeter wave range : 187 -2,500 nm, complete with standard accessories for use on 230V. 50Hz. A.C. Model 330	1 set
<u>(C) BULK (A) NECESSARY INSTRUMENT</u>		
C/No. 7	<u>Item No. 1</u> Ampoule	1,000 pcs.
<u>(E) FINAL WORKS EQUIPMENT</u>		
	<u>Item No. 1</u> Hand Tightner Cat. No. HCF-2	1 pc.
	<u>Item No. 2</u> Electric Spray complete with standard accessories and stepdown transformer Model MS-4	4 pcs.
	<u>Item No. 3</u> Electric Heater complete with standard accessories and stepdown transformer	5 pcs.

- contd -

C/Nos.	Description of Goods	Quantity
<u>Item No. 4</u>	timer for air conditioner Cat. No. TE-341	5 pcs.
<u>Item No. 5</u>	Vernier Caliper	1 pc.
<u>Item No. 6</u>	Aluminium Foil 270 wide, 1,000 mm. long	1 pc.
<u>Item No. 7</u>	Polyethylene Tank. cap.: 20 liters	4 pcs.
<u>Item No. 8</u>	Nipper	6 pcs.
<u>Item No. 9</u>	Rubber Glove	5 pairs
<u>Item No. 10</u>	Reducing Valve Cat. No. BH-1	2 pcs.
<u>Item No. 11</u>	Compressor complete with standard accessories and stepdown transformer Model SDC-10 65w	1 set
<u>Item No. 12</u>	Rectangular Case size: 500 x 300 x 300mm Cat. No. K-1	2 pcs.
<u>(F) GASS WARES</u>		
<u>Item No. 1</u>	Connector Tube, 5 $\phi$ x 7 x 70 L. mm.	2 doz.
<u>Item No. 2</u>	- ditto -, but 8 $\phi$ x 10 x 70 L.mm.	2 doz.
<u>Item No. 3</u>	- ditto -, but 7-10 $\phi$ x 70 L. mm.	1 doz.
<u>Item No. 4</u>	- ditto -, but 10 x 20 x 100 L.mm	1 doz.
<u>Item No. 5</u>	- ditto -, but 15 $\phi$ x 20 x 100 L.mm	2 doz.

- contd -

C/Nos.	Description of Goods	Quantity
<u>Item No. 6</u>	Cylinder, glass, 10 ml.	2 doz.
<u>Item No. 9</u>	Y-shaped Connector, large	1 doz.
<u>Item No. 10</u>	- ditto -, but small	1 doz.
<u>Item No. 11</u>	Three way Connector, large	1 doz.
<u>Item No. 12</u>	-ditto -, but small	1 doz.
<u>(G) DISPENSERS</u>		
<u>Item No. 1</u>	Air Filter, pack of 6 pcs. Cat. No. DFA-3001A	4 packs
<u>Item No. 2</u>	Silicone Tube, 20 $\phi$ x 30 mm - ditto -, but 6 $\phi$ x 12mm.	50 pcs. 50 pcs.
<u>Item No. 3</u>	Silicone Tube, 8 $\phi$ x 15 mm. -ditto -, but 4 $\phi$ x 8 mm.	50 pcs. 50 pcs.
<u>Item No. 4</u>	Rubber Spray Cat. No. 6152-08	1 doz.
<u>Item No. 5</u>	Kocher's Hemostatic Forceps	2 doz.
<u>Item No. 6</u>	Forceps, 180 mm.	2 doz.
<u>Item No. 7</u>	Mero Spatula	20 pcs.
<u>Item No. 8</u>	Cellophane Paper	2,000 pcs.
<u>Item No. 9</u>	Parchment Paper size: 1,016 x 762 mm.	2,000 pcs.
<u>Item No. 10</u>	Stainless Steel Can 180 $\phi$ x 180. (H) mm.	5 pcs.

G/Nos.	Description of Goods	Quantity
<u>Item No. 11</u>	Cleaned Cloth 30 x 30 cm	50 pcs.
<u>Item No. 12</u>	Sterilizing Tape 18 mm. x 50 m.	50 pcs.
<u>(H) TOOLS</u>		
<u>Item No. 1</u>	Wrench, No. 2600 3/8 - 1"	2 pcs.
<u>Item No. 2</u>	- ditto -, but No. 2700M8 -27mm.	1 pc.
<u>Item No. 3</u>	Cocket Wrench, No. 1750 7/16 - 1" set of 13 pcs.	2 sets
<u>Item No. 4</u>	- ditto -, but No. 1770M8 -26 mm. ISO Standard	2 sets
<u>Item No. 5</u>	Monkey Wrench, 150, 200, 250, 300mm. set of 1 pc: each	2 sets
<u>Item No. 6</u>	Spanner, No. 30W 3/8 - 1" set of 6 pcs.	2 sets
<u>Item No. 7</u>	- ditto -, but No. 35M6 -24mm	2 sets
<u>Item No. 8</u>	Flare Tool, 1/8 - 3/4, No. 1459	1 pc.
<u>Item No. 9</u>	Ratchet Wrench, No. 123-c	2 pcs.
<u>Item No. 10</u>	Pipe Cutter, No. 274-FC	1 pc.
<u>Item No. 11</u>	Plier, No. p-200	4 pcs.
<u>Item No. 12</u>	Sexangule Wrench, 6HM	2 pcs.

- contd -



C/Nos.	Description of Goods	Quantity
<u>Item No. 13</u>	Gear Puller, No. GL-10	1 pc.
<u>Item No. 14</u>	Screw Driver (-) No. 310-75, 310-100, 310-125, 310-150, set of 1 pc. each	4 sets
<u>Item No. 15</u>	Screw Driver (+) No. 310-0, No. 310-1, No. 310-2, No. 310-3, set of 1 pc. each	4 sets
<u>Item No. 16</u>	Insulating Cutting Plier No. 1050H-175	2 pcs.
<u>Item No. 17</u>	Belt Punch ϕ 3, 5, 6, 8, 10, 13, 16, 19, 22, 25 mm., No. BP-10s set of 1 pc. each	1 set
<u>Item No. 18</u>	Pipe Wrench, No. EP-350, EP-450, set of 1 pc. each	1 set
<u>Item No. 19</u>	Hand Press, Cat. No. AK-15	1 pc.
<u>Item No. 20</u>	Rasp, flat	2 pcs.
<u>Item No. 21</u>	Rasp, half round	2 pcs.
<u>Item No. 22</u>	Rasp, round	2 pcs.
<u>Item No. 23</u>	Band Saw for metal, No. 225	1 pc.
<u>Item No. 24</u>	Digital Resistor, No. 3204	1 pc.
<u>Item No. 25</u>	Digital Tester, No. 3207	2 pcs.
<u>Item No. 26</u>	Digital Ammeter, No. 3206	1 pc.

- contd -

C/Nos.	Description of Goods	Quantity
<u>Item No. 27</u>	Gas Leakage Detector	1 pc.
<u>Item No. 28</u>	Soldering Iron for use on 230V. 50Hz. A.C. Cat. No. SSS-80	1 pc.
<u>Item No. 29</u>	Soldering Paste, 20ϕ, pack of 1 kg.	1 pc.
<u>Item No. 30</u>	Snapring Plier for inner Cat. No. CH-10	1 pc.
	- ditto -, but for outer Cat, No. CS-10	1 pc.
<u>(I) ORHTERS</u>		
<u>Item No. 1</u>	Scale	2 pcs.
<u>Item No. 2</u>	Calculator	1 pc.
<u>Item No. 3</u>	Magic Pen	6 doz.
<u>Item No. 4</u>	Scotch Tape Cat. No. 29-18	30 pcs.
<u>Item No. 5</u>	Vinyl Tape Cat. No. 21R-20	30 pcs.
<u>Item No. 6</u>	Cloth Tape, 50mm. x 50 m.	20 pcs.
<u>Item No. 7</u>	Olive Tape, 50mm. x 50 m.	20 pcs.
<u>Item No. 8</u>	Adhesive Agent, 1 kgs. Cat. No. BQS-100	1 pc.
<u>Item No. 9</u>	Pipe Seal, No. 95-5	30 pcs.

C/Nos.	Description of Goods	Quantity
	<u>Item No. 10</u> Tape, 25mm., No. 903	5 pcs.
	<u>Item No. 11</u> Hose Band, s.s., for 8mm, diam. - ditto -, but for 15mm. diam. - ditto -, but for 30mm, diam.	20 pcs. 20 pcs. 20 pcs.
<u>(J) QUALITY CONTROL</u>		
C/No.8	<u>Item No. 1</u> Egg Incubator complete with standard accessories for use on 230V. 50Hz. A.C. Model P-05	1 set
C/No. 9	<u>Item No. 3</u> Co2 Incubator for microplasm sterility test complete with standard accessories, for use on 230V. 50Hz. A.C. Model 1002-A-2	1 set
C/No. 10	<u>Item No. 4</u> Microscope complete with standard accessories, for use on 230V. 50Hz. A.C. Model CKC-Bi-1	1 set
	<u>Item No.5</u> Analytical Balance complete with standard accessories for use on 230V. 50Hz. A.C. Model SP-200D, Cat. No. 3117	1 set
	<u>Item No. 7</u> High Speed Autoclave max. pressure: 1.7 kg/cm <sup>2</sup> max. temp. : 127°C complete with standard accessories for use on 230V. 50Hz. A.C. Model SD-30N	1 set
	<u>Item No. 8</u> Filter Hodler Apparatus consisting of; 1. Stainless steel filter holder..1pc. Cst. No. YY3029316 2. Pump, Cat. No. XX5511050 ...1 pc.	1 set

C/Nos.	Description of Goods	Quantity
	3. Hose Connector Cat. No. XX6000017	...1 pc.
	4. Pre-Filter, pack of 25 pcs... Cat. No. AP2529325	2 packs
	5. Filter, pack of 25 pcs. Cat. No. HAWP29325	...2 packs
	6. Filter, pack of 25 pcs. Cat. No. GSWP29325	...2 packs
	7. Forceps Cat. No. XX6200006	...1 pc.
	8. Tube, No. 1-4	...1 pc.
	9. Tube, 2-2	... 1pc.
	10. Tube, No.3	...1 pc.
	<u>Item No. 9</u> Homogenizer complete with standard accessories and stepdown transformer Model AM-5	1 set
	<u>Item No. 12</u> Handy Cooler Cat. No. CL-19	1 set
	<u>Item No. 15</u> Heat-Proof Water Tank size: 400 x 300 x 200 mm. outer diam. : 13 mm. w/nozzle	1 pc.
C/No. 11	<u>Item No.6</u> Clean Bench complete with standard accessories and spare filters, for use on 230V. 50Hz. A.C. Model CCV-1311	1 set
C/No. 12	<u>Item No. 13</u> Ice Cuber cap.: 450 kgs/day complete with standard accessories, for use on 230V. 50Hz. A.C. Model F-510AWC-SB	1 set

- contd -

C/Nos.	Description of Goods	Quantity
C/No. 13	<u>Item No. 14</u> Hot Air Sterilizer Inner dimensions: 100W x 60D x 75Hcm complete with standard accessories, for use on 230V. 50Hz. A.C. Model 1630-DS	1 set
	<u>(K) QUALITY CONTROL, CONSUMABLE (1)</u>	
C/No. 14	<u>Item No. 1</u> Sterilizing Case for petri dish size: 30 x 50 x 30 cm.	5 pcs.
	<u>Item No. 2</u> Centrifuge Tube Pack, s.s. for medium size x 12pcs. for small size x 24 pcs.	5 pcs. 5 pcs.
	<u>Item No. 3</u> Test Tube Pack, 16.5mm. x 50 pcs. - ditto -, but 12.0mm. x 50 pcs.	15 pcs. 10 pcs.
	<u>Item No. 4</u> Scissors, for eye scissors for operation	30 pcs. 30 pcs.
	<u>Item No. 5</u> Dental Forceps	30 pcs.
	<u>Item No. 6</u> Sponge Holding Forceps	15 pcs.
	<u>Item No. 7</u> Blood Corpuscle Counting Chamber Cat. No. 2033-B	2 pcs.
	<u>Item No. 8</u> Spray, cap.: 400 ml.	2 pcs.
	<u>Item No. 9</u> Teflon Bar Cat. No. 7578-4A	5 pcs.
	<u>Item No. 10</u> Micro Pipette, cap.: 0.1 ml. - ditto -, but cap.: 0.2 ml. Cat. No. 2107 Tip for above, pack of 1,000 pcs.	3 pcs. 3 pcs. 1 pack
	<u>Item No. 11</u> Rubber Spray, No.6	3 pcs.

C/Nos.	Description of Goods	Quantity
<u>Item No. 13</u>		
	Continous Dispenser	
	cap. : 1 ml., Cat. No. JS-1	10 pcs.
	2 ml., Cat. No. JS-2	10 pcs.
	10 ml., Cat. No. JS-10	10 pcs.
<u>Item No. 15</u>		
	Centrifuge Tube, 50 ml.	20 pcs.
	Cat. No. 8993	
<u>Item No. 16</u>		
	Plastic Tray, pack of 50 pcs.	1 pack
	No. 3047	
<u>Item No. 17</u>		
	Rubber Tube, 6 $\phi$ x 8mm., 1 kg	1 pc
	- ditto -, but 9 $\phi$ x 13 mm., 1 kg	2 pcs.
	- ditto -, but 7 $\phi$ x 14 mm., 10 m.	2 pcs.
	- ditto -, but for gas, 10 m.	3 pcs.
	- ditto -, but 8 $\phi$ x 12mm., 1m	50 pcs.
<u>(L) QUALITY CONTROL, CONSUMABLE (2)</u>		
<u>Item No. 1</u>		
	Flask, 500ml	10 pcs.
	Cat. No. 304	
<u>Item No. 2</u>		
	Petri Dish, 75 x 18mm.	600 pcs.
	Cat. No. 1530	
<u>Item No. 3</u>		
	Culture Bottle, 1 liter	100 pcs.
	- ditto -, but 500 ml.	100 pcs.
	- ditto -, but 200 ml.	100 pcs.
	- ditto -, but 2 oz	300 pcs.
<u>Item No. 4</u>		
	Rubber Stopper, No. 2	100 pcs.
	- ditto -, but No. 5	100 pcs.
	- ditto -, but No. 8	100 pcs.
	- ditto -, but No. 11.	100 pcs.
<u>Item No. 5</u>		
	Polythylene Bottle, narrow mouth	200 pcs.
	cap. : 100 ml.	
TOTAL :	<u>14 wooden cases</u>	<u>44 sets, 9,882 pcs., 25 doz., 6 packs and 5 pairs</u>

C/Nos.	Description of Goods	Quantity
1 4.	(B) <u>BULK WORKS</u>	
	Ultr-Dispator	2 sets
	Max. speed: 10,000 r.p.m.	
	Consisting of:	
	Main body	1 set
	Shaft	1 pc
	Holder	1 "
	Generator, TP45/6G	1 "
	Generator, TP45/2G	1 "
	Speed controller	1 "
	Stand	1 "
	complete with standard accessories for use on 230V. 50Hz. A.C.	
	Temperature Recorder	1 "
	Temp. Range: -80°C - +70°C	
	complete with standard accessories, for use on 230V. 50Hz. d A.C.	
	Model EH200-12	
	Optional accessories	
	1. Sensor	15 pcs.
	Cat. No. CSK1-D	
	2. Trolley for recorder	
2 11.	Ion Exchanging Unit	1 "
	complete with resin regeneration unit Model SM-25	
	(D) <u>FINAL WORKS</u>	
	Ion. Exchanging unit	1 "
	complete with resin regeneration unit Model SM-25	
	Ion Exchanging unit	1 "
	complete with resin regeneration unit Model SM-25	
3. 2.	(J) <u>QUALITY CONTROL</u>	
	Co2 Incubator for tissue culture complete	2 "
	for use on 230V. 50Hz. A.C.	
	Model 1002-B2	

(2)

C/Nos.	Description of Goods	Quantity
4	<u>(F) GLASS WARES</u>	
7/8	Siphone set for 20 liters	30 sets
J-2	Standard accessories only 1 set	
	<u>(K) QUALITY CONTROL, CONSUMABLE (1)</u>	
12.	Mesh Cylinder for egg	1 pc
14.	Wide Mouth Bottle, cap. : 20 liters with stop-cock	2 "
TOTAL:	Four (4) Cases only	38 sets & 3 pcs

(第3回海送分)

Nos.	Description of Goods	Quantity
1	Cart OA-556	6 sets
	RICOPY FT-3020	1 "
	Table	1 "
	Paper B4	4 box
	" A4	4 "
	" B5	4 "
	Toner	4 pcs
	Developer	2 "
	Silicon oil	2 "
	Washing Machine Hitachi PS-92	4 sets
	" " PS-62	1 "
	Total: One (1) Case only	13 sets 12 boxes 8 pcs



JAPAN INTERNATIONAL COOPERATION AGENCY

P.O. Box 216, Mitsui Bldg., Shinjuku-ku, Tokyo, Japan.

PACKING LIST

Consigned to: CENTRAL RESEARCH INSTITUTE, KASAULI, No: \_\_\_\_\_

MINISTRY OF HEALTH AND FAMILY WELFARE,  
THE GOVERNMENT OF THE REPUBLIC OF  
INDIA,

Date: Sep. 19, 1983

NEW DELHI, INDIA  
(TECHNICAL COOPERATION BY THE  
GOVERNMENT OF JAPAN)

Shipped per Air Craft

Shippin Mark:

from Tokyo, Japan

SIDE MARK

TECHNICAL COOPERATION  
BY THE GOVERNMENT OF JAPAN

to New Delhi

via \_\_\_\_\_



on Sept. 28, 1983

NEW DELHI

C/No. 1 - 7

MADE IN JAPAN

C/Nos	Description of Goods	Quantity
	<u>MEDICINE</u>	
C/No. 1	NYCOSTATION (20ml)	3 pcs
	BOVINE SERUM (100ml)	30 pcs
C/No. 2	CALF SERUM (500ml)	12 pcs
C/No. 3	CALF SERUM (500ml)	12 pcs
D/No. 4	M-199 (100L)	4 pcs
	BOVINE, ALBUMIN (50g)	3 pcs
	EAGLE MEN (10L)	10 pcs
C/No. 5	M-199 (100 L)	6 pcs
C/No. 6	M-199 (100 L)	6 pcs
C/No. 7	EARLE (50L)	10 pcs
	YEASTIATE (100g)	1 pce
	GERATIN (500g)	2 pcs

Total: SEVE (7) Cartons only 99pcs 88kgs 123 kgs

Country of Origin: Japan

JAPAN INTERNATIONAL  
COOPERATION AGENCY.

P.P KEISUKE ARITA  
PRESIDENT

E.&.O.E

JAPAN INTERNATIONAL COOPERATION AGENCY

P.O. Box 216, Mitsui Bldg., Shinjuku-ku, Tokyo, Japan.

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MINISTRY OF HEALTH AND FAMILY WELFARE,  
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NEW DELHI

C/No.

MADE IN JAPAN

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C/Nos.	Description of Goods	Quantity
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NECICINE

No. 101 M-199 (100ml) 4 pcs

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Total: ONE (1) Carton only 4 pcs

Country of Origin: Japan

C/Nos.	Description of Goods	Quantity
2	4. FREON GAS	17 kgs. 6 pcs
3	9. ETHYLENE GYCOL	225 kgs. 5 "
4	1. GRANUIATED SUGAR	30 kgs. 11 "
	2. HIBITEN	5 L. 16 "
	3. THIMEROSALUM	100 g 1 "
	1. APIENON GREASE	50 g 5 "
	2. SILICON GREASE	50 g 10 "
	3. SILICON OIL	1 kg 2 "
	5. ROTALY PUNP OIL TYPE 15	2.5 L. 20 "
	6. ROTALY PUNP OIL TYPE 16	20 "
	7. SUNISO 3 GSD	20 L. 2 "
	3. TRYPSIN	25 g 12 "
	4. NEUTRAL RED	25 g 2 "
	6. LACTALBUMIN HYDROLYSATE	500 g 2 "
	7. BACTO AGAR	100 g 50 "
	9. PENISILLIN 300 E	100mlx10V 10 "
	10. STREPTOMYCIN	30 "
	1. CLEANER (NEOPECBS-K)	10 kgs. 80 "
	2. PROTAMINE SULFATE	1 kg. 5 "
	5. DECISUTOROHYCIN	1 "
	6. KANAMYCIN	8 x 10V 1 "
	1. HIBITEN	500 ml 24 "
	3. SAPO MECICINALIS	500 g. 48 "
	4. PHOSPHORUS ANHYDRIDE	500 g. 12 "
	5. SILICAGEL BLUE	500 g. 10 "
	8. NA-GLUTAMATE	500 g. 20 "
5	3. FORNAIDE	500 ml 8 "
6-11	2. FORNAIDE	18 kgs. (@2 " ) 12 "
TOTAL:		Ten (10) Cases only 425 pcs

JAPAN INTERNATIONAL COOPERATION AGENCY

P.O. Box 216, Mitsui Bldg., Shinjuku-ku, Tokyo, Japan.

PACKING LIST

Consigned to: CENTRAL RESEARCH INSTITUTE, KASAUJI, No: \_\_\_\_\_

MINISTRY OF HEALTH AND FAMILY WELFARE,  
THE GOVERNMENT OF THE REPUBLIC OF  
INDIA,

Date: 0 \_\_\_\_\_

NEW DELHI, INDIA  
(TECHNICAL COOPERATION BY THE  
GOVERNMENT OF JAPAN)

Shippin Mark:

Shipped per \_\_\_\_\_

from Tokyo, Japan

to \_\_\_\_\_

via \_\_\_\_\_

on \_\_\_\_\_

SIDE MARK

TECHNICAL COOPERATION  
BY THE GOVERNMENT OF JAPAN



NEW DELHI

C/No.

MADE IN JAPAN

C/Nos.	Description of Goods	Quantity
<u>TECHNICAL EQUIPMENT OF J.I.C.A.</u>		
1	EAGLE MEM	10 PCS
TOTAL : ONE (1) PKG ONLY		10 PCS

No	Name	Specification	Maker & Type	Qty	Total Price (thousand Yen)	Remarks
1	Ultra low temperature cabinet	-85 ~ -45°C, 351 liters with recorder and standard accessories	REVCO/ULT-1285	2 sets	5,900	
2	Refrigerated centrifuge	6,000 rpm, 6,760 g with standard and special accessories	HITACHI/6PR-52	5 sets	10,500	4 set for bulk process 1 set for Q.C.
3	KII-Zonal centrifuge	1) 35,000 rpm, 90,000 g, over 80 liters per hour, 8 liter rotor capacity with accessories and spare parts 2) Air compressor (317 KW), after cooler, drain separator filter, receiver tank, dryer, cooling tower (10t), pump (0.75 KW), chiller, piping & electric wiring materials	ENI/K-MARK-II (COLOMBIA TRADE CO. LTD in Japan) HODOGAYA-GIKEN	1 lot	87,000	including installation fee and adjustment fee  including lay out fee/ excluding installation fee
4	Automatic vial filling line	Rotary turn table, Automatic filling machine, Automatic half-way and fully rubber stoppering machine, Automatic single tray leader (intermediate accumulator), Automatic sealing machine with spare parts for line	KEETE CO. LTD /At-900, AT-800 5F-L 8I-U AB-100 4E-4	set 3 1 1 1 1	53,120	excluding installation fee
5	Freeze-dryer	8 shelves, bial 24.5 φmm × 50H mm (or 36H mm) 18096 bials, condenser capacity-ice 240 kg, -70°C with gas exhausting device, cooling water device, moisture content measuring system, pall filter 0.2 μ,	EDWARDS/CH-80 (NISSAN EDWARDS SHINKU in Japan)	1 set  set 1 1 2	89,258	excluding installation fee

No	Name	Specification	Maker & Type	Qty	Total Price (thousand, Yen)	Remarks
5	(cont'd)	pall filter with spare parts for line		2 sets		
6	Steam auto- clave	900 × 1,000 × 2,500 mm, 250l, automatic, with vacuum pump, recorder and acces- sories	NITTO RIKA KOOGYO/UC-A- 202D	1 set	8,500	excluding installation fee
7	Dryer oven	1,200 × 1,200 × 1,500 mm, Max 250°C with recorder and accessories	NITTO RIKA KOOGYO/DSP- A-68	1 set	8,800	excluding installation fee
8	Water purifica- tion system	860 × 1,100 × 1,800 mm, 20 l per hour with spare parts	TOYOKAGAKU/ GS-200T	1 set	4,800	
9	Filtration device for purified water	with spare parts	MARUSHO SAN- GYO/G723H4	2 sets	2,720	
10	Air condition- ing system	Air conditioner with heater, air condi- tioning fan, control cabinet, duct, wiring materials and spare parts	HITACHI REI- NETSU/Air handling Unit UA-30AR	1 set	8,300	excluding installation fee
TOTAL					278,898	











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