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APPENDICES

Appendix A: Cost of the plasmapheresis unit

Detail of the capital costs of the plasmapheresis unit per year (annual depreciation cost)

Item	Number	Cost
Plasmapheresis chairs	2	14,000
Deck chair	10	200
Fiber chair	8	175
Field chair	4	600
Portable concealer	1	5,400
Mobile concealer	1	7,900
Machine model TSCD ME*SC201A	1	35,000
Plastic bag concealer	1	203
Machine model IHP-200-04	1	12,500
Bar coder model 2H #9110547, #9110548	2	1,112.80
Autopheresis PC	2	151,200
Plasmapheresis machine PCS-2 and stabilizer	7	1,500,000
Shelf	8	2,054.40
Sofa	3	600
Freezer -30°C 20 cub.	3	18,000
Plasmapheresis bed model MD 2000	7	24,500
Field table	2	200
Television set	1	3,356
Telephone	1	1,900
Ventilator 6"	1	180
Ventilator 8"	1	78
Freezing room -30°C	1	82,347.20
Freezing room model Norlake –MRODF 77810-CX	1	179,760
total	69	2,041,266.40

Detail of the logistic supply cost in the plasmapheresis unit per year

Item	Cost
Barcode PVC sticker	6,750
Aluminum foil	784.61
Syringe	10,796.96
Autoclave tape	406.60
Thermometer	1,498
Waver for TSCD	718,783.20
95% ammonia	342.26
ACD-A 250 ml Spike BAG @142	142,000
95% alcohol	4,140.90
Collection set "620" @180	266,400
Plasma Apheresis bowl "625JE" @250	357,500
Plasma collection set "620" @420	600,600
Single donor red cell "924F: @3,600	432,000
Syringe 2.5 cc ST	19,981.45
Syringe 10 ml	3,648.70
2% Xylocaine	1,952.48
Tissue paper	721.99
A4 paper	660
Fax paper	1,156.38
Foam box	117.70
Biscuit	6,757.61
Uniform	6,716.67
Dish washer solution	420
Stamp	900
Red bin bag	3,372.90
Black bin bag	9,000

*Detail of the logistic supply cost in the plasmapheresis unit per year
(Con't)*

Plastic bag	23,855.30
Cidex solution	15180
Syrup	986.86
Small towel	254.58
Scot brite	156.94
Soap	600.58
Straw	225.02
Gown	2,800
Plastic cup	9,630
Instant tea	180
Broom	119.99
Grove	26,648.35
Blood chemistry request form	780
Plaster	7,996.45
25% Xylocaine	1,952.48
Red sticker (infectious)	7040
Total	2,695,941

Detail of the labor cost in plasmapheresis unit

Labor	Cost
Salary	141,320.40
Over time (OT)	43,748
Total	185,068

Cost of laboratory testing for each donor

Cost of Laboratory per donor (baht)	Number of donor	Total cost
280	1.696	474,880

Utility cost in department of plasmapheresis unit and plasma unit

Utility cost	Plasmapheresis unit	Plasma unit
Electricity	647,673.9	1,943,021.7
Water	31,162.73	31,162.73
Phone	4,544.42	9,088
Post	45,410	85,145
Total	728,791.05	2,068,417.43

*The electricity and water cost is allocated according to meters and power of the machine.

*Phone and post cost was from the administrative record.

Detail of administrative cost allocation for plasmapheresis unit and plasma unit

Unit	Dept. of Public relationship	Building department	Office department	Monetary department	Record department
Plasmapheresis	260,894	400,599.22	214,984.12	742,055	248,049
Plasma	234,804	545,808.48	293,160.16	989,406	1,091,418

Detail of administrative cost allocation for plamapheresis unit and plasma unit (Cont.)

Unit	Total administrative cost
Plasmapheresis	1,866,581.34
Plasma	3,154,596.64

*This utility cost is allocated according to the number of staff in the department.

Appendix B: Cost of the plasma unit of HRIG

Detail of the capital costs of the production unit per year (annual depreciation cost)

Cost of Precipitating & Freezing room

Item	Number	Cost
CEPA	3	557.100
Mixer	3	7.062
Alcohol cooler machine-I	1	72.760
Alcohol cooler machine-II	1	49.000
Peristatic Pump-I	2	44.000
Peristatic Pump-II	2	50.000
Filter press	2	199.780
Volume measurer	1	374.5
Stainless tank 170 liter	5	14.445
Weight measurer	1	7.500
pH meter	1	4,750
Electrode	1	1,800
Filling solution	1	400
Standard buffer	1	140
Pressure tank	1	5,000
Wheelbarrow	6	17,334
Plastic box	1	12,000
Filter press stand-I	2	490
Filter press stand-II	1	890
Bowl stand	1	875
Shirt post	1	140
Air conditioner	5	13,900
Freezer	1	7,500
Stainless tank 280 liter	2	13,000
Total	46	1,080,241

Cost of Containing room

Item	Number	Cost
Laminar for containing	1	29,800
Laminar for calibrating	1	15,000
Mixer-I	1	518
Mixer-II	1	570
Mixer-III	1	802.5
Mixer-IV	1	802.5
Wheelbarrow	2	5778
Pump watson	2	19,688
Stainless tank 170 liter	3	8,667
Pump SN 16677	1	19,500
Housing filter	1	29,500
Housing UF	1	4,100
Magnetic stirrer	1	4,950
Small wheelbarrow	1	909.5
Weight measurer	1	2,500
Volume measurer	1	1,605
.pH meter	1	4,750
Electrode	1	1,800
HRIG sealer	1	4,000
Stainless tank 200 liter	1	5,900
Stainless tank 50 liter	2	2,950
Stainless with hole	3	14,700
Tank 20 liter	5	2,950
Pressure tank	1	8,000
Pump	1	19,940
Milidisc filter	1	10,000

Cost of Containing room (Cont.)

Water bath machine	1	5,000
Memmert machine	1	19,955
UT6760	1	19,800
Oven 200°C	1	24,000
Hot air oven	2	4,970
Incubator-I	1	4,950
Incubator-II	1	14,800
Incubator-III	1	19,955
Water sprayer	1	9,750
Oven 220°C	1	6,600
total	48	349,460.5

Cost of Plasma unit (P IIC) (cost per one lot)

Item	Number	Cost
Blood bag (bag)	200	175,600
95% alcohol (liter)	100	2,800
Na ₂ HPO ₄ .12H ₂ O (gram)	500	525
Acetic acid (ml)	560	168
NaCl (gram)	300	123
NaOH (gram)	60	30.6
CH ₃ COONa.3H ₂ O (gram)	204	183.6
Filter AKS	12	1,188
Filter K100	10	980
Filter EKS	12	1,188
Biuret test (test)	5	38.5
Distilled water (liter)	300	1,800
Laboratory cost: individual	200	46,000
minipool	10	2,300
Silicone (foot)	5	1,690
Rabies vaccine (per lot)	1	20,000
Total		254,615

*One lot = 800 vials

Cost of HRIG Containing unit (cost per lot)

Item	Number	Cost
Glycine (gram)	330	1,742.4
Thimerosal (gram)	1.5	31.14
Small filter (gram)	1	2,640
Filter K100	2	198
Filter EKS	4	392
Silicone tube (foot)	3.5	1183
Plastic band	10	17.6
Bottle 500 ml	95	4,298.75
Topknot	95	627
Vial 5 ml	1000	6,750
Box with sticker and label	1000	2,250
Foil (box)	2	101
Biuret test (test)	4	30.8
Distilled water (liter)	250	1,500
Laboratory testing (per lot)	1	230
Total		21,991.69

*One lot = 800 vials

Durable article and its cost in plasma unit (depreciation over 5 years)

Item	Number	cost
Book case	7	2,582
Wardrobe	4	2,492
Air ventilator	4	981
Meter	1	302
Mixer stand	2	390
Drill	4	2,176
Stand	1	900
dynamo	1	880
Water bath "heto"	1	19,260
Bowl (CEPA)	6	414,000
Pump	4	15,880
Time bender	1	400
Filter	2	39,804
Auto filling machine	1	15,000
Cold alcohol	1	49,900
Solution blender	4	12,335
Pumping machine	3	78,400
Anti electrical short machine	1	878
Solution mixer	1	3,600
Type writer	1	4,800
Oven	1	9,850
Pump	2	19,688
Plasma filter stand	1	14,700
UF stand	1	1,145
Mixer	2	3,525
Stainless table	2	37,000

Durable article and its cost in plasma unit (depreciation over 5 years) (Cont.)

HEPA	1	4,890
Air ventilator	2	9,844
Peristatic pump	2	25,000
Emergency light	1	550
Computer	1	3,729
Printer	2	6,788
Chair	10	2,301
Drill stand	1	300
Telephone	3	380
Sink	1	428
table	4	1,436
Total		806,514

Cost of fixation of the machines in plasma unit

Fixed item	Fixing cost
CEPA machine (PM34)	300
Pump machine model 603S	107
Satorius weighting machine	240.75
Chillwe air conditioner	789.13
Washing machine	25.18
Usifroid freeze dryer	3,620.35
Air compressor	529.75
Fixing clean room	117,700
Nylon wheel	149.8
Usifroid spine freeze	6,353.13
Total	129,815.49

Labor cost in plasma unit

Type of labor	Cost
Salary	831,480
Over time	684,800
Total	1,516,280

*This total labor cost was allocated to the unit of plasmapheresis and plasma unit according to the work-load (time hour)

Appendix C: Detail of production cost of ERIG (estimation cost by year 2000)

Estimated expenses of each department (excluded raw material and packing material)

Year	electricity	Water, post, phone	Administrative	Quality assurance Dept.	Serum production Dept.	BCG production Dept
2002	4,084,997	1,800,000	12,333,283	3,682,894	6,984,438	3,537,368

Cost of production ERIG per vial

Item	Cost
Plasma	80
Raw material	36
Packing materials	10
Own department expense	31.75
Electricity	4.54
Water, post, phone, etc	2
Administrative cost	5.6
Quality assurance cost	5.05
Transportation cost	7
Depreciation cost	84.4
Insurance cost	1
Total cost	267.34

Production Quantity (by estimation in year 2000)

Product	Estimation vol.	Depreciation cost of new investment
Snake antivenom	60.000	168.8
ERIG	100.000	84.4
BCG	400.000	14.58
PPD	15.000	-

Distribution of new plant investment

Dept.	Building		Clean room and water supply		Machine		Total depreciation cost
	Total cost for 20 yrs	Depreciation cost per year	Total cost for 10 years	Depreciation cost per year	Total cost for 5 years	Depreciation cost per year	
Serum production	29,575,297	1,478,765	20,000,000	2,000,000	75,442,575	15,088,575	18,567,280
BCG/PPD production	7,367,803	368,390	14,632,803	1,463,280	20,000,000	4,000,000	5,831,670
Drinking water	1,717,803	85,890	1,867,197	186,720	2,300,000	460,000	732,610
Total	38,660,903	38,660,903	36,500,000	36,500,000	97,742,575	97,742,575	171,440,675

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