

APPENDIX I : LABORATORY EQUIPMENTS

Sl No.	Items	Quantity	Specification
1	PLANCK'S CONSTANT APPARATUS	1	AMBEY MAKE
2	DETERMINE THE DIELECTRIC CONSTANT OF NON-POLAR LIQUID	1	AMBEY MAKE
3	DETERMINATION OF E/M THOMSON'S METHOD	1	AMBEY MAKE
4	DIODE LASER 659nm POWER 3mW	1	ACUMEN/HALLMARK
5	DUAL POWERSUPPLY +/-15V 2A	3	SCIENTIFIC +/-15V/2A/Prominent
6	AMMETER 0-10mA	2	EIC MAKE/Simson
7	VOLTMETER 0-1000mV	2	EIC MAKE/Simson
8	DIGITAL GAUSS METER WITH PROBE FOR HALL EFFECT, UP TO 4000 GAUSS	1	AMBEY MAKE-CAN READ UP TO 4000 GAUSS
9	DIGITAL MULTIMETER DM 97	3	HTC/Prominent
10	YOUNGS MODULUS APPARATUS, KAMALIITH	1	KAMALIITH
11	SOLAR CELL APP, KAMALIITH	1	KAMALIITH
12	VERNIER CALIPER	2	SS
13	SCREW GAUGE	2	SS
14	LDR	10	
15	BRASS METAL SHEET FOR KONING'S APP	1	100cmX2.5cm
16	IC 74151	10	
17	IC 74154	10	
18	IC CD 4046	10	
19	IC 7432	10	
20	IC 7410	10	
21	IC 555	50	
22	IC 741	20	
23	IC 7400	50	
24	IC 7402	20	
25	IC 7486	30	
26	IC 7408	20	
27	CAP 10MFD	50	
28	CAP 0.01MFD	50	
29	CAP 0.1MFD	20	
30	CAP 0.02MFD	20	
31	CAP 100MFD	50	
32	RESISTORS 10K/15K/22K/200E/1.2K/6.8K/1K/2.2K/5.6K/220K	260	
33	DIODE IN 4001	50	



34	TRANSISTOR BC547	50	
35	PHOTO DIODE	20	
36	ZENER DIODE 4.8V&5.6V	20	
37	THERMISTER	20	
38	LED-BLUE/GREEN/YELLOW/RED	80	
39	CAP 1MFD	20	
40	FIBER OPTIC APPARATUS	1	MITTAL
41	AC SOURCE	3	PROMINENT
42	BOILING POINT APPARATUS	1	SH, chennai
43	STALAGMOMETER	7	SH, chennai
44	VISCOMETER	3	SH, chennai



APPENDIX II: CHEMICALS

Sl.No.	Name of Chemicals	Company	Number to be purchased
1.	Acetone	Merck SRL	1
2.	Aluminium Sulphate	Merck SRL	1
3.	Ammonium Acetate	Merck SRL	1
4.	Ammonium Borate	Nice SRL	2
5.	Ammonium Carbonate	Merck Nice SRL	1
6.	Ammonium Chloride	Merck Nice SRL	2
7.	Ammonium Fluoride	Merck Nice SRL	1
8.	Ammonium Oxalate	Merck Nice	1
9.	Ammonium Phosphate Dibasic	Merck	1
10.	Ammonium Molybdate	Merck Nice	1
11.	Ammonium Nitrate	Nice	1
12.	Ammonium Thiocyanate L.R	Merck Nice	1
13.	Aniline L.R	Merck Nice	1
14.	Barium Carbonate	Merck	1
15.	Barium Chloride Dihydrated	Merck	1
16.	Barium Nitrate	Merck	1
17.	Barium Sulphate	Merck Nice	2
18.	Benzaldehyde	Merck Nice	1
19.	Benzene	Merck Nice	1
20.	Benzoic Acid	Merck Nice	1
21.	Benzoyl Chloride L R	Nice	1
22.	Calcium Acetate Dried	Nice	1



23.	Calcium Borate	Nice	1
24.	Calcium Carbonate	Nice	1
25.	Calcium Chloride Fused	Nice	1
26.	Calcium Fluoride	Nice	1
27.	Calcium Nitrate	Nice	1
28.	Calcium Phosphate	Nice	1
29.	Ceric Nitrate	Nice	1
30.	Charcoal activated	Nice	1
31.	Cobalt Nitrate	Nice	1
32.	Conc. Hydrochloric Acid 35% pure	Nice	1
33.	Con. Nitric Acid 70% pure	Nice	1
34.	Conc. Sulphuric Acid	Nice	1
35.	Copper Sulphate	Nice	1
36.	Diethyl Ether	Merck Nice	1
37.	Diphenyl Amine	Merck Nice	1
38.	Eriochrome Black T A R	Merck Nice	1
39.	Ferric Alum	Merck	1
40.	Ferrous Ammonium Sulphate	Merck	1
41.	Ferrous Sulphate	Merck	1
42.	Ferrous Sulphide stick fused	Merck	1
43.	Filter paper ordinary	Whatman	1
44.	Filter paper What man No 40	whatman	1
45.	Filter paper Whatmann no 41	whatman	1
46.	Glucose dextrose anhydrous	Merck Nice	1
47.	Glycerol	Merck Nice	1
48.	HCl	Commercial	1
49.	Hydrogen peroxide 6% solution	Nice	1
50.	Hydrogen peroxide 30% solution	Nice	1
51.	Iodine	Merck Nice	1
52.	Lead acetate tetra hydrated	Merck Nice	1
53.	Lead nitrate	Merck Nice	1



54.	Lithium nitrate anhydrous	Nice	1
55.	Magnesium borate	Nice	1
56.	Magnesium carbonate light	Merck Nice	1
57.	Magnesium nitrate	Merck Nice	1
58.	Magnesium sulphate	Merck Nice	1
59.	Magnesium phosphate	Nice	1
60.	Mercuric chloride	Merck Nice	1
61.	Metallic sodium	Merck Nice	1
62.	Methyl orange	Merck Nice	1
63.	Methyl salicylate	Merck Nice	1
64.	Mohrs salt	Merck Nice	1
65.	Sodium hydroxide LR	Merck Nice	1
66.	Napthalene	Nice	1
67.	Nickel ammonium sulphate AR	Nice	1
68.	Nickel sulphate	Nice Merck	1
69.	Nitric acid commercial	Nice	1
70.	Nitro benzene AR	Merck	1
71.	N-phenyl antranilic acid	Nice	1
72.	o-nitro phenol	Nice	1
73.	Oxalic acid	Merck Nice	1
74.	Phenolphthalein powder	Merck Nice	1
75.	Phosphorous penta chloride	Loba	1
76.	Phthalic acid	Merck Nice	1
77.	Picric acid	Merck Nice	1
78.	p-nitro phenol	Loba Nice	1
79.	Potassium bromate AR	Merck Nice	1
80.	Potassium chloride	Merck Nice	1
81.	Manganese sulphate	Merck	1



		Nice	
82.	Resorcinol AR	Merck Nice	1
83.	Salicyl amide GRM 7465	Loba Himedia	1
84.	Salicylic acid LR	Merck Nice	1
85.	Silica gel for TLC	Merck Nice	1
86.	Silica gel for column	Merck Nice	1
87.	Soda lime	Merck Nice	1
88.	Sodium carbonate	Merck Nice	1
89.	Sodium acetate anhydrous	Merck Nice	1
90.	Sodium bicarbonate	Merck Nice	1
91.	Sodium hydroxide pellets	Merck Nice	1
92.	Sodium nitrate	Merck Nice	1
93.	Sodium potassium tartarate	Merck Nice	1
94.	Sodium sulphate anhydrous	Merck	1
95.	Sodium thiosulphate	Merck Nice	1
96.	Toluene	Merck Nice	1
97.	Zinc acetate	Merck Nice	1
98.	Zinc carbonate	Loba Nice	1
99.	Zinc nitrate	Merck Nice	1
100	Zinc sulphate	Merck Nice	1
101	Zinc phosphate	Loba Nice	1
102	Zirconyl nitrate hydrated GRM 1856	Himedia	1
103	Styrene GRM 8641	Himedia	1
104	Acryl amide GRM 1110	Himedia	1
105	Petroleum ether 60-80	Merck Nice	1



106	Poly vinyl alcohol(hot water soluble,60000-125000 GRM 1171	Himedia	1
107	Poly vinyl alcohol mw 30000-50000 GRM 2405	Himedia	1
108	Sodium nitrite	Merck Nice	1
109	Alizarin S	Merck Nice	1
110	Tollens reagent	Merck Nice	1
111	Ethanol	Merck Nice	1
112	N,N- dimethyl aniline	Merck Nice	1
113	ZnSO ₄ .7H ₂ O	Merck Nice	1
114	Chloro benzene	Merck Nice	1
115	Biphenyl	Nice	1
116	Starch	Nice	1
117	EDTA	Merck	1
118	Iodine	Merck Nice	1
119	β-naphthol	Merck Nice	1
120	Resorcinol	Merck Nice	1
121	2,4-dinitro phenyl hydrazine	Merck Nice	1
122	n-hexane	Merck Nice	1
123	Petroleum ether	Merck Nice	1
124	Nessler's reagent	Merck Nice	1
125	Ammonium hydroxide	Merck Nice	2
126	Lead chloride	Merck Nice	1
127	Nitrobenzene	Nice	1
128	Barium phosphate	SRL	1
129	Thorium nitrate	SRL	1
130	Liquor ammonia	Merck Nice	1



131	Glacial Acetic Acid	Merck	2
132	Acetone 500 Ml	Nice	
133	ANTHRONE 25gm	Merck	2
134	Ammonium Molybdate 100 Gm	Nice	4
135	Ammonium Acetate 500 Gm	Nice	4
136	Albumin Bovine Fraction Powder 98% 5gm	Merck	1
137	Buffer Powder Ph 4 (10 Cps)	Nice	1
138	Buffer Powder Ph 7 (10 Cps)	Merck	1
139	Follins Ciocalteu Reagent	Nice	2
140	Potassium Chloride	Merck	1
141	Crystal Violet Solution (Oxalated)	Nice	1
142	Diphenyl Alanine	Merck	1
143	Dipotassium Hydrogen Ortho Phosphate	Nice	1
144	Grams Iodine	Merck	1
145	Hydrogen Peroxide 30%	Nice	3
146	Ferrous Ammonium Sulphate 500gm	Merck	1
147	Potassium Hydroxide Pellets 500 Gm	Nice	2
148	Ninhydrin Ar 10 Gm	Merck	2
149	Phenolphthalein 125 Ml	Merck	2
150	Potassium Iodide 500 Gm	Nice	1
151	Potassium Dichromate 500 Gm	Merck	1
152	Potassium Nitrate 500 Gm	Nice	1
153	Phosphoric Acid 500 Ml	Merck	1
154	Potassium Di Hydrogen Ortho Phosphate 500 Gm	Nice	1



155	Silica Gel G For Tlc 500 Gm	Merck Nice	1
156	Sodium Dihydrogen Ortho Phosphate 500 Gm	Merck Nice	1
157	Di-Sodium Hydrogen Ortho Phosphate 500 Gm	Merck Nice	1
158	Sodium Thiosulphate 500 Gm	Merck Nice	2
159	Trichloro Acetic Acid 50 Gm	Nice	10
160	Sodium Hydroxide Pellets 500 Gm	Nice	2
161	Sulpho Salicylic Acid 500 Gm	Merck	1
162	Sodium Chloride 500 Gm	Merck Nice	1
163	Chloroform	Nice	1
164	Acetone	Iso Chem	2
165	Hydrochloric Acid	Iso Chem	5
166	Demineralized Water	Nice	2
167	Dm Water (Deionised)	Nice	2
168	Nitric Acid	Iso Chem	5
169	Glycerine	Iso Chem	1
170	Copper Sulphate Crystal	Iso Chem	1
171	Carbon Tetra Chloride	Loba	1
172	Sulphuric Acid	Iso Chem	3
173	Aluminium Foil	Nice 80 Mm Sheet	2
174	Potassium Permanganate	Iso Chem	1
175	Whats Man Filter Paper No.1 Pkt	Grade 1	2
176	Benzene	Iso Chem	1
177	Laboratory Rolled Tissue Paper	Wipster Tissue Roll	5 ROLL
178	2-methoxy ethanol (Methyl cellosolve)	Nice	1
179	Agar for bacteriology	Himedia	2
180	Agarose	Himedia	2
181	Beef extract	Loba Chemie	1
182	Benedicts reagent	Nice	1
183	Bromophenol blue	Nice	1
184	Calcium chloride	Nice	2
185	Chloroform	Nice	2
186	Isoamyl alcohol	Nice	1
187	Citric acid	Nice	1
188	Clove oil	Nice	1
189	Sodium phosphate Dibasic	Nice	2
190	Dinitro salicylic acid	Nice	2



191	Disodium EDTA	Nice	1
192	DPX	Nice	2
193	Ethidium bromide	Sigma-Aldrich	1
194	Fehling's solution A	Nice	1
195	Fehling's solution B	Nice	1
196	Formaldehyde	Nice	3
197	Galactose	Otto Chemie	1
199	Glacial acetic acid	Otto Chemie	2
200	Glucose	Nice	1
201	Glycerol	Nice	1
202	Gram staining kit	Nice	1 packet
203	Guaiaicol	Himedia	1
204	Hydrogen peroxide	Nice	1
205	Iodine solution	Nice	2
206	Isopropanol	Nice	4
207	Maltose	Nice	1
208	Methyl orange indicator	Nice	2
209	Millions reagent	Nice	1
210	Molischs reagent	Nice	2
211	Sodium phosphate monobasic	Nice	2
212	Ninhydrin	Nice	1
213	Propan-1-ol (n-Propyl alcohol)	Nice	1
214	Paraffin liquid light	Nice	1
215	Peptone	Nice	1
216	Phenophthalene indicator	Nice	5
217	Phosphoric acid	Nice	1
218	Potassium chromate-99%	Nice	1
219	Potassium hydroxide pellets-85%	Nice	1
220	Potassium sodium tartarate 99%	Nice	2
221	Silica gel 60-120 mesh for column chromatography	Nice	1
222	Silver nitrate	Nice	1
223	Sodium acetate anhydrous	Nice	1
224	Sodium alginate for synthetic seed	Nice	1
225	Sodium carbonate anhydrous	Nice	2
226	Sodium chloride	Nice	1
227	Sodium citrate	Nice	1
228	Sodium hydroxide	Nice	4
229	Sodium lauryl sulphate	Nice	1
230	Soluble starch A.R.	Nice	1



231	Stannous chloride (Tin Chloride)	Nice	1
232	Sucrose	Nice	4
233	Sulphosalicylic acid	Nice	3
234	Sulphuric acid	Nice	4
235	Toluene(99.5%)	Nice	1
236	Tris Base	Himedia	2
237	Xylene	Nice	4
238	Safranin	Nice	2
239	Glycerine	Nice	1



APPENDIX III – GLASSWARES

SL. NO	ITEM	SPECIFICATION	NUMBER
1.	BOD Bottles	250 Ml Borosil	5
2.	Non- Absorbent Cotton	3 Bundles	3
3.	Pipette 1 Ml	1 Ml Borosil	3
4.	Pipette 20 Ml Volumetric	20 ml Borosil R	6
5.	Pipette	2ml Borosilicate	5 Nos
6.	Pipette Pump	10ml Fzn	2 Nos
7.	Pipette Pump	5ml Fzn	2 Nos
8.	Chromatographic Chamber (Borosil)	15x10 Inch Borosil	3
9.	Chromatography Chamber	100 Cm Length And 40 Inner Diameter Borosil	4
10.	Glass Dropper	8 Ml	10
11.	China Dish 3” Export Quality	Micro	10
12.	Fusion Tube		200
13.	Measuring Jar	10 ml Borosil R/ Merck	1
14.	Standard Flask Volumetric	100 ml Borosil R	5
15.	Separating Funnel	250 ml Borosil R	2
16.	Test Tube	15x125 With Rim 15 Ml Borosil R	15
17.	Thermometer	1/10, 300° C Sensitivity Jenneson	1
18.	Burette Straight Bore Stop Cock	Accuracy As Per Class B Of I.S 50 Ml Borosil R	5
19.	Blotting Paper	46cmx58cm Minimacro Scientific Instruments	1packet
20.	Brush	Big Above 15 Cm Camlin	12 Nos



21.	Brush	Small (Below 15 Cm) Camlin	10 Nos
22.	Cavity Slide	75mmx25mm Blue Star	1box
23.	Coverslip	22x22mm Blue Star	10 Box
24.	Eppendorf Tube	5ml Sigma Aldrich	100 Nos
25.	Whatman Filter Paper Disc	No.1	1packet
26.	Forceps Long	10inch Moglix	4 Nos
27.	Ganongs Potometer	Moglix	2 Nos
28.	Grafting Knife	Falcon	10 Nos
29.	Grafting Tape	1inch Widthx100m Mplus	2 Roll
30.	Measuring Cylinder	25ml Bfc	2
31.	Measuring Cylinder	100ml Bfc	3
32.	Micropipette Tip	10microlitre Indo Surgicals	100 Nos
33.	Spatula Large	6" Rng	7nos
34.	Surgical Blade Holder	3 Size Holder Thermo	5 Nos
35.	Surgical Blade Holder	4 Size Holder Thermo	5nos
36.	Aluminium Foil	11microns Freshwrapp	2rolls
37.	Cling	30m Ecoplus	2rolls
38.	Quartz prism	18mmx18mmx18mm	2

