



**STANDARD  
LIST**

# **ESSENTIAL EQUIPMENT LIST for Cataract Surgery**

**Version: First Edition (May 2015)**



IAPB considers appropriate information as a vital resource in improving eye health. In resource-constrained settings especially, procurement decisions can play an important role in, ensuring appropriate equipment and supplies are accessed, equitable access to quality services is facilitated, the investment makes a satisfactory social return and significantly enhances the quality of life of the beneficiaries.

IAPB consults panels of experts with considerable experience, to identify good practice and assist with the compilation of **IAPB Essential Equipment Lists** especially for use in resource constrained settings. NGOs, Ministries of Health, District Health Services, eye clinics and hospitals can use the **IAPB Essential Equipment Lists** to plan and purchase inventory.

**Please visit the IAPB Standard List at <http://iapb.standardlist.org> for latest pricing and special rates for IAPB members and their partners.**

Cataract remains the major cause of treatable blindness. This *IAPB Essential Equipment for Cataract Surgery* has thus been included in the IAPB Standard List (<http://iapb.standardlist.org>). This list contains a limited range of adequate supplies of essential items to perform high quality surgery. It offers suggestions for Extracapsular Cataract Extraction (ECCE), Manual Small Incision Cataract Surgery (MSICS) and Phacoemulsification procedures. These have been calculated for 1000 cataract cases per annum at a base hospital. Quantities can be easily adjusted for different caseloads.

This list provides additional general guidelines to facilitate planning / budgeting. Please note, however, all responsibilities for decisions remain entirely with ophthalmologist, programmes and partners. Items marked N/A will be sourced and added to the Standard List during 2015.

IAPB wishes to acknowledge and thank the following experts and organisations for their input and support in compiling this list:

- Thulasiraj Ravilla, LAICO-Aravind Eye Care System
- Vishnu Prasad, Aurolab-Aravind Eye Care System
- Dr Haripriya, Chief Cataract Clinic, Aravind Eye Care System
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- Dr Neil Murray, RANZCO and Fred Hollows Foundation NZ
- Dr R n e du Toit, Independent Eye Health Consultant
- Philip Hoare, Procurement Manager IAPB
- Dr Van Lansingh, Help Me See USA
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## ESSENTIAL EQUIPMENT LIST for Cataract Surgery

Description	Standard List Section/ locally purchased (L)/ not included (N/A)	Essential (E) or if Funds Available (IFA)	Quantity Required
<b>OUTPATIENT EQUIPMENT</b>			
<i>Click on Link</i>			
Slit Lamp with Stand and table top	<a href="#">5.7</a>	E LED if possible	1
Observer tube for Slit Lamp	<a href="#">5.7</a>	E	1
Binocular Indirect Ophthalmoscope with Case	<a href="#">5.2</a>	E LED if possible	2
Observer mirror for the Indirect Ophthalmoscope	<a href="#">5.2</a>	E	1
Direct Ophthalmoscope	<a href="#">5.1</a>	E LED if possible	2
Spare Bulbs for non LED equipment	<a href="#">5.1</a>	Not required if LED	4 pcs for one year
Ultrasonography (A or A/B scan) all in one or separate	<a href="#">5.9</a>	E	1
Keratometer	<a href="#">5.9</a>	E	1
Auto refractor/keratometer	<a href="#">5.4 / 5.9</a>	IFA	1
20D lens for Indirect Ophthalmoscope	<a href="#">5.12</a>	E	2
78D or 90D lens for slitlamp	<a href="#">5.12</a>	E	2
Goldman Applanation Tonometer	<a href="#">5.6</a>	E	1
Gonio lens (three mirror and single mirror)	<a href="#">5.8</a>	E	2
<b>OPERATING THEATRE EQUIPMENT</b>			
Portable Operating Microscope (OM)	<a href="#">3.10</a>	E LED if possible	2
Observers Tube for OM	<a href="#">3.10</a>	IFA	1
OM Spare Bulb and Fuse Pack	<a href="#">3.10</a>	Not required if LED	5
Floor Stand for microscope	<a href="#">3.10</a>	E	2
Portable Operating Lamp with stand	<a href="#">3.11</a>	E LED if possible	2
Spare Bulbs for lamp	<a href="#">3.11</a>	Not required if LED	4
Operating Pillow	N/A	E	2
Eye Pressure Reducer	<a href="#">3.15</a>	E	2
Electric Cautery (with cautery leads, forceps)	<a href="#">3.7</a>	E	2
Vitrectomy Machine (with Infusion, Vitrectors, Case)	<a href="#">3.9</a>	E	1
Spare Disposable Vitrectors	<a href="#">3.9</a>	E	10
Instrument trolley	N/A	E	5
Kidney Bowl 0.5L	N/A	E	5
Gallipots	N/A	E	5
Operating Table	<a href="#">3.5</a>	E	2
Operating Chair	N/A	E	2
OT Linen (Gown, Table Cloth, Eye Towel, Cap, Mask, Patient Gown, Hand towels etc)	L	E	
<b>STERILISING EQUIPMENT</b>			
Autoclave – Horizontal or vertical e.g. IDEN	<a href="#">3.8</a>	E	1
Bench top sterilizer/autoclave e.g. Melag	<a href="#">3.8</a>	E	2

## ESSENTIAL EQUIPMENT LIST for Cataract Surgery

Description	Standard List Section/ locally purchased (L)/ not included (N/A)	Essential (E) or if Funds Available (IFA)	Quantity Required
<b>STERILISING EQUIPMENT – Continued</b>			
<i>Click on Link</i>			
Timer (if not built in to autoclave)	L		1
Portable autoclave	<a href="#">3.8</a>	E	1
Chittle Forceps (big forceps to handle sterilize materials)	N/A		2
Sterilizing Drums	<a href="#">3.8</a>	E	4-8
Instrument Soaking Tray 210 x 130mm	<a href="#">3.15</a>	E	5
Instrument Sterilizing Boxes, Lid and Silicone Mat	<a href="#">3.15</a>	E	10
Distilled water unit for sterilizers	L	E	1
Spirit Lamp with Wick (to sterilize glass rods for cautery)	<a href="#">3.15</a> or L	E (may not be required if electric cautery system is used)	2
<b>SURGICAL INSTRUMENTS</b>			
<b>ECCE SURGICAL SET IN METAL STERILISING BOX 10 SETS</b>			
<b>Forceps</b>			
Forceps, for wet field electric cautery (Unipolar & Bipolar)	<a href="#">4.0</a>	E	10
Forceps, Superior rectus, <i>Landolts</i>	<a href="#">4.0</a>	E	10
Forceps, Fixation	<a href="#">4.0</a>	E	10
Forceps, Toothed <i>Moorfields</i>	<a href="#">4.0</a>	E	10
Forceps, Non-Toothed <i>Moorfields</i>	<a href="#">4.0</a>	E	10
Forceps, Mosquito, curved	<a href="#">4.0</a>	E	10
Forceps, Mosquito, straight	<a href="#">4.0</a>	E	10
Forceps, Corneal, 0.12mm Atraumatic Tips, Angled with Tying Platform	<a href="#">4.0</a>	E	10
Forceps, Corneal, 1x2 Teeth, 0.12mm, with 6mm Tying Platform	<a href="#">4.0</a>	E	10
Forceps, suture tying, cilia or <i>Birks</i>	<a href="#">4.0</a>	E	10
Forceps, Lens Introducing, Angle to Tip 8-12mm, Smooth Jaw, <i>Kellman Mc Pherson</i>	<a href="#">4.0</a>	E	10
Forceps, Capsulorhexis, Angle to Tip 11mm, Sharp Tip to use as a Cystotome, <i>Utrata</i>	<a href="#">4.0</a>	E	10
<b>Needle holders</b>			
Needleholder, Straight for 4/0, 5/0, 6/0 or 7/0 Suture	<a href="#">4.0</a>	For larger sutures	10
Needleholder, Curved or Straight, overall length 10-11mm, Jaws 8mm, for 8/0 to 10/0 Suture	<a href="#">4.0</a>	For fine sutures	10
<b>Blades and Handles</b>			
Troutman blade handle	<a href="#">4.0</a>	E	10
Razor Fragments OR blade slit knife (disposable)	<a href="#">4.0</a>	E	100
Blade, disposable keratomes	<a href="#">4.0</a>	E	100
Blade, disposable Crescent (bevel up)	<a href="#">4.0</a>	E	100
Super blade 15 Degree	<a href="#">4.0</a>	E	100

Description	Standard List Section/ locally purchased (L)/ not included (N/A)	Essential (E) or if Funds Available (IFA)	Quantity Required
<b>Scissors</b>			
<i>Click on Link</i>			
Scissors, Conjunctival, <i>Westcotts</i>	<a href="#">4.0</a>	E	10
Scissors, Corneal Section (Corneoscleral), 10mm blades	<a href="#">4.0</a>	E	10
Scissors, Angled, 10mm, Extra thin Blades, Barraquers	<a href="#">4.0</a>	E	10
Scissors, iridectomy, <i>De-Wecker's</i> OR <i>Vannas</i>	<a href="#">4.0</a>	E	10
Scissors, Capsulotomy, fine	<a href="#">4.0</a>	E	10
Scissors, iris, sharp pointed	<a href="#">4.0</a>	E	10
Ordinary Scissors (for cutting big sutures and threads and eye lashes)	L	E	10
<b>Cannulae</b>			
Cannula, Rycroft 30 gauge	<a href="#">4.0</a>	E	10
Cannula, Air Injection, 27G Angle to Tip 5mm	<a href="#">4.0</a>	E	10
Cannula Visco-Elastic, 22G, Angle to Tip 10mm	<a href="#">4.0</a>	E	10
Cannula, Simcoe, Irrigating / Aspirating, 23G, Angled, aspiration through top opening, 15mm	<a href="#">4.0</a>	E	10
Cannula, Irrigating Vectis, Three Ports 23G	<a href="#">4.0</a>	E	10
<b>Other</b>			
Kuglen Iris Hook and Lens Manipulator	<a href="#">4.0</a>	E	10
Sinsky hook straight or angled	<a href="#">4.0</a>	E	10
Lens expressor	<a href="#">4.0</a>	E	10
Iris Spatula or repositor, <i>Nettleship</i>	<a href="#">4.0</a>	E	10
Vectis, Lens Loop or wire, <i>Snellen</i>	<a href="#">4.0</a>	E	10
Muscle Hook or squint hook, <i>Graefe</i>	<a href="#">4.0</a>	E	10
Cautery Ball or electric cautery	<a href="#">4.0</a>	E	10
Calipers 1-20mm in 1mm Increments	<a href="#">4.0</a>	E	10
Speculum, 12mm Blade (Adult and child)	<a href="#">4.0</a>	E	10
Speculum, Barraquer's, Weiss or wire speculum, adjustable	<a href="#">4.0</a>	E	10
Towel clip, cross action	<a href="#">4.0</a>	E	10
<b>SICS – ADDITIONAL INSTRUMENTS 5 SETS</b>			
Keratome (bevel up) 2.7-3.5mm	<a href="#">4.0</a>	E	250
Knife: Slit / Keratome, Angled 3.2mm (bevel up)	<a href="#">4.0</a>	E	250
Knife: Crescent, Angled, 2.5mm (bevel up)	<a href="#">4.0</a>	E	250
Knife: MVR 19G	<a href="#">4.0</a>	E	250
Knife: 15 Degree Stab	<a href="#">4.0</a>	E	250
Metal Handle for the above Single Use Knives or Purchase Knives & Handle Combined	<a href="#">4.0</a>	E	10

**ESSENTIAL EQUIPMENT LIST for Cataract Surgery**

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<b>PHACO – ADDITIONAL INSTRUMENTS</b>			
<i>Click on Link</i>			
Phacoemulsification Machine	<a href="#">3.16</a>	E	1
Phaco Hand Piece, tip and accessory pack with silicone sleeve	<a href="#">3.16</a>	E	1
Irrigation- Aspiration tip (co-axial)	<a href="#">4.0</a>	E	2
Bimanual irrigation hand pieces	<a href="#">4.0</a>	E	2 sets
Keratome (bevel up) 2.7-3.5mm	<a href="#">4.0</a>	E	250
Knife, MVR 19G	<a href="#">4.0</a>	E	250
Phaco chopper	<a href="#">4.0</a>	E	10
Spatula, fine iris	<a href="#">4.0</a>	E	10
Forceps, IOL folding and inserting	<a href="#">4.0</a>	E	10
<b>CONSUMABLES</b>			
<b>Blades (included in sets)</b>			
<b>Needles</b>			
Needle, 23g, 30-35mm long	<a href="#">3.3</a>	Retrobulbar block	1,000
Needle, 26g	<a href="#">3.3</a>	Peribulbar block	1,000
Needle, 27g	<a href="#">3.3</a>	For cystitome – bend manually	1,000
Needles, superior rectus, for 5/0 cutting silk	<a href="#">3.3</a>	E	20 pkts (12 pcs)
Cutting Eye Needles for Lid Surgery	<a href="#">3.3</a>	E	10 pkts (1 pcs)
6/0 Vicryl spatulated Cutting Needle 20mm	<a href="#">3.1</a>	E	10 pkts (12 pcs)
<b>Syringes</b>			
5ml disposable syringes leur lock	<a href="#">3.3</a>	BSS, simco, aspiration	500
2ml disposable syringes leur lock	<a href="#">3.3</a>	Viscoelastics	500
1ml disposable syringes leur slip	<a href="#">3.3</a>	Adrenaline, tryphan blue and pilocarpine	500
<b>Sutures</b>			
9/0 Nylon double armed sutures spatulated needles	<a href="#">3.1</a>	E	50 boxes (12 pcs)
10/0 Nylon double armed sutures spatulated needles	<a href="#">3.1</a>	E	50 boxes (12 pcs)
4/0 Black Braided Silk on a Reel	<a href="#">3.1</a>	E	1 reel 1000m
Prolene 5/0 , double armed with spatulated needles	<a href="#">3.1</a>	For lid surgery	10 boxes (12 pcs)
<b>IOLS</b>			
IOLs 19 – 21D, Single Piece with Dialling Holes (0.50D increments)	<a href="#">3.6</a>	E	200
IOLs 21 – 23D, Single Piece with Dialling Holes (0.50D increments)	<a href="#">3.6</a>	E	800

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<b>IOLS – Continued</b>			
<i>Click on Link</i>			
IOLs 24 – 25D, Single Piece with Dialling Holes (0.50D increments)	<a href="#">3.6</a>	E	200
AC Lenses 19D Three or Four Point Fixation	<a href="#">3.6</a>	E	50
Capsular tension ring (11mm)	<a href="#">3.6</a>	E	50
<b>Other</b>			
1mm Silicone tube	N/A	To connect simcoe cannula and syringe	10 m
Rolls of Protective Silicone Tubing for delicate instrument tips	N/A	E	10 m
Eye Drape (125cm)	N/A	E	1000
Eye Drape small (25cm)	N/A	E	500
Gloves (different sizes 7 – 8.5)	<a href="#">3.2</a>	E	2000
Leukoplast adhesive tape 10cm	<a href="#">3.15</a>	E	500
Gauze Rolls	<a href="#">3.15</a>	E	500m
Triangular Swabs (Microsponges)	<a href="#">3.15</a>	E	5 pkts (500pcs)
<b>Sterilization</b>			
Autoclave Tape / Steam indicator roll	<a href="#">3.15</a>	E	500m
Biological indicator (steam sterilization)	N/A	IFA	500
Chemical indicator (steam sterilization)	N/A	IFA	500
<b>PHARMACEUTICALS</b>			
<b>Antiseptics</b>			
Povidone Iodine Aqueous Solution 10% (200ml)	<a href="#">1.1</a>	E	200 bottles
Antiseptic hand scrub minimum 70% alcohol (500ml)	L	E	200 bottles
Scrubbing Brush	L	E	6pcs (one per user)
Antiseptic handwash solution (500ml)	L	E	200 bottles
Perasafe sterilizing powder 81g	L	E (for outreach, not for base hospital)	50 bottles
<b>Disinfectants</b>			
Isopropyl alcohol 70% minimum	L	E	20 litres
Sodium hypochlorite	L	E	20 litres
Chlorhexidine aqueous 0.5%	L	E	10 litres
<b>Drops</b>			
Proparacaine 0.5% 5ml	<a href="#">1.8</a>	E	200
Tropicamide + Phenylephrine 5mls	<a href="#">1.4</a>	E	200
Atropine 1% 5ml	<a href="#">1.4</a>	E	100
Lidocaine 2% + Adrenaline 1:100,000, 50ml	<a href="#">1.8</a>	E	50 vials
Hyaluronidase 1500 IU	<a href="#">1.13</a>	E	50 amps
Gentamicin 0.3% + Dexamethasone 0.1%, 10ml	<a href="#">1.1</a>	E	1,500

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Description	Standard List Section/ locally purchased (L)/ not included (N/A)	Essential (E) or if Funds Available (IFA)	Quantity Required
<b>Drops – Continued</b>			
<i>Click on Link</i>			
Ciprofloxacin 0.3% 5ml	N/A	E	500
<b>Ointment</b>			
Ciprofloxacin with Dexamethasone 10mg 5mg	<a href="#">1.1</a>	E	100
<b>Injectables</b>			
Vancomycin 1 gm powder in bottle	<a href="#">1.1</a>	E	20 bottles
Ceftazidime 1gm powder in bottle	<a href="#">1.1</a>	E	20 bottles
Cefuroxime 750 mg or 250 mg powder in bottle	N/A	E (prefer 750mg)	500 bottles
Dexamethasone Sodium Phosphate 4mg/ml Injection	<a href="#">1.2</a>	E	500 vials
Pilocarpine Nitrate Injection 0.5%, 1ml	<a href="#">1.5</a>	E	50 amps
Methycellulose HPMC in prefilled Syringes with Cannula 2ml	<a href="#">3.6</a>	E	1,500 pcs
Trypan blue 0.06% 1ml (5 vials)	<a href="#">3.6</a>	E	100 vials
Adrenaline 1mg/1ml vial	<a href="#">1.4</a>	E	500
Ringers Lactate 500ml	<a href="#">3.6</a>	E	500
<b>REFRACTION AFTER SURGERY</b>			
Retinoscope	<a href="#">5.3</a>	E LED if possible	5
Spare Bulb for Retinoscope	<a href="#">5.3</a>	Not required if LED	1 pack
Cross Cylinder 0.5	<a href="#">5.5</a>	E	5
Trial Frame, Adult	<a href="#">5.5</a>	E	5
Examination Loupe x 2.5 Magnification	<a href="#">5.14</a>	E	5
Auto-refractor-keratometer	<a href="#">5.4</a>	IFA	1
Focimeter	<a href="#">5.5</a>	E	1
Distance and near vision charts, E charts	<a href="#">5.5</a>	E	5
Trial frame, children	<a href="#">5.5</a>	E	5
Children's vision charts	<a href="#">5.5</a>	E	5



## Resources

Publication / Manual	Published by	Where available
Ophthalmic operating theatre practice	Cox, Ingrid, Stevens, Sue	ICEH
Monitoring Cataract surgical outcomes, 2005, Author: Limburg H	ICEH	<a href="http://www.cehjournal.org/article/monitoring-cataract-surgical-outcomes-methods-and-tools/">http://www.cehjournal.org/article/monitoring-cataract-surgical-outcomes-methods-and-tools/</a>
Aravind ECCE SICS teaching series		CBM standard list
Care of Ophthalmic Surgical Instruments (I Cox & S Stevens) Control of Infection in Ophthalmic Practice (S Stevens) Sterilization and Disinfection (I Cox & S Stevens)		JCEH

# WORKING TOGETHER TO ELIMINATE AVOIDABLE BLINDNESS

IAPB's Essential Equipment Lists identify equipment and consumables considered essential, minimum requirements to perform high quality medical interventions in eye health contexts. IAPB produces these lists in collaboration with leading experts from around the world and updates them from time to time.



Published by International Agency for the Prevention of Blindness  
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