

EcoSep

Economic Separations



www.ecosep.in

Horizontal Electrophoresis Apparatus

Vertical Electrophoresis Apparatus

Electroblotting Apparatus

Gel-Documentation

Power Supplies

Micropipettes

Minipipettes

pH Meters

Product Catalog

EcoSep product overview

1. TechResource manufactures and markets products under the brand name **EcoSep** and we issue a *Manufacturing Certificate* to facilitate purchasing formalities.
2. We offer a **One-Year Warranty** against manufacturing defects and such repairs will be done **free of cost** during the warranty period. The product can be shipped to TechResource office in Mumbai where it will be attended to and returned to the user.
3. Systems marked '**Ready-to-use**' include all essential components required to use the apparatus (Power supply not included). Spares and accessories are also available with us.
4. **Do not use chemicals that adversely react with acrylic (PMMA).**
5. Please visit the website www.ecosep.in or www.techresource.in for further details.
6. Enquiries may be sent to sales@techresource.in
7. Design and specifications of the apparatus can be changed from time to time to reflect improvements in design, manufacturing methods and the economical availability of inputs.

ORDERING INFORMATION, PAYMENT and SHIPPING TERMS

1. Make sure catalog numbers for ordered items are correct.
2. Prices are subject to change without notice.
3. Prices are for ex-sellers place. Freight is charged on actuals or on a TO-PAY basis. Products are shipped via a reliable courier service by surface transport.
4. Taxes & Levies applicable at the time of dispatch will be borne by the Client.
5. Quotations are valid for a period of 90 days.
6. 100 % Payment ON DELIVERY by Demand Draft, NEFT, or by crossed Account Payee cheque drawn on any nationalized bank in favor of TECHRESOURCE and payable at par at Mumbai.
7. Interest @ 15% per annum will be charged if payments are not received as per stipulated Terms of Payment.
8. Exemptions of taxes and levies can be availed ONLY if valid forms are submitted along with the order.
9. Products will be shipped only after receipt of the relevant shipping permits.

DISCLAIMER

1. TechResource is not bound to provide demonstrations and installations.
2. To and fro transportation cost for repairs is to be borne by the client when warranty is not applicable.
3. EcoSep products are designed and made for educational purposes and are to be used for the same. TechResource will accept no liabilities arising out of product misuse or abuse.

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***ECONOMIC RANGE
VERTICAL GEL APPARATUS
SALIENT FEATURES***



Leak-proof

- No leakage of upper tank buffer as silicone gasket is tough & resilient
- No buffer leaks from plastic joints as sticking is done with special glues
- Leak-proof sealing using agarose in lower tank trough & slotted spacers

Error Minimization

- No slippage of gel sandwich due to in-situ gel casting
- No migration of samples in wrong direction due to unidirectional feature
- Straight wells as combs sit completely levelled on spacers

Rugged

- Breakage resistant parts such as spacers thick glass notched plate
- Electrodes do not break as they are thick and platinum is >99.9% pure
- No electrolytic corrosion of male connector as base is resin filled

Economical

- Very low amounts of buffer used
- Short and defined run times as gels can be run at constant current
- Can be run in the refrigerator due to its small size
- Saves reagent & operator cost as leakage and errors are prevented

**ECONOMIC RANGE
VERTICAL GEL APPARATUS
SELECTION GUIDE**

Model	No. of gels at a time	Gel size			No. of wells/ gel	Casting stand (for agar free sealing)	Buffer requirement (mL)	Recommended power supply*
		width (cm)	length (cm)	thickness (mm)				
SLIMPAGE E0100142	1	4	8.5	1.5	4	No	50	Beacon Electravolt LightSaber Spark
SLIMPAGE E0100144	1	4	8.5	1.5	4	Yes	50	
ECOPAGE E0200142	1	7	8.5	1.5	8	No	100	
ECOPAGE E0200144	1	7	8.5	1.5	8	Yes	100	
MIDIPAGE E0410142	1	10	10	1.5	12	No	250	Beacon Spark
TUBBYPAGE E0300142	1	14	16	1.5	13	No	700	

* - Power supply unit is not included in the ready to use system

SLIMPAGE

Gel size: 4 (w) x 8.5 (l) cm

- ✓ **Single sided model**
- ✓ **In-situ gel casting/ Casting stand**
- ✓ **Designed for optimum gel cooling**
- ✓ **No sample loss as uni-directional migration**

- ✓ **Gel thickness: 1.5 mm**
- ✓ **No. of wells: 4**
- ✓ **Buffer requirement: 50 mL**
- ✓ **10% SDS-PAGE run in 70 min**



Slimpage with casting stand (right)

Features of this apparatus

Economical

- Less buffer required by virtue of its compact design
- For faster separations the apparatus can be conveniently placed in the refrigerator due to its small footprint
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Durable PMMA combs, spacers & thick glass plates
- No electrolytic corrosion of male connector as base is resin filled
- Electrodes do not break out pit as they are protected and the platinum is >99.9% pure

Leak-Proof

- No leakage of upper tank buffer as silicone gasket is tough & resilient
- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing with agar in lower tank trough

Error Minimization

- No slippage of gel sandwich due to in-situ gel casting
- No migration of samples in wrong direction due to unidirectional feature
- Wells are not formed at a slant as combs sit leveled on spacers

Ready-to-use system includes

1. Lower anodic tank fitted with male connector and electrodes
2. Cathodic electrode unit fitted with male connector & electrode
3. Resilient silicone gasket for cathodic electrode unit
4. Two notched and two rectangular glass plates
5. Four 1.5 mm thick, breakage resistant, rounded spacers
6. Two PMMA comb (1.5 mm thick, 4 wells, est. vol. 75 µL/well)
7. Set of clamps with screws
8. Gel-casting stand for single gel (One back plate, one front plate)
9. C shaped rubber gasket for single gel of 1.5 mm
10. Electrical cords with male & female connectors
11. Instruction manual

	E0100142	E0100144
	Y	Y
	Y	Y
	Y	Y
	Y	Y
	Y	Y
	Y	Y
	Y	Y
	-	Y
	-	Y
	Y	Y
	Y	Y

Ordering description

Slimpage (E0100142): Vertical electrophoresis single sided system of gel size 4 (w) x 8.5 (l) cm, 1.5 mm spacers, comb 1.5 mm. PMMA, 4 wells with male connectors, in situ gel casting, uni-directional migration.

Slimpage with Casting stand (E0100144): Vertical electrophoresis single sided system of gel size 4 (w) x 8.5 (l) cm, 1.5 mm spacers, comb 1.5 mm, PMMA, 4 wells with male connectors with agarose free casting stand, male connectors, casting stand with 'C' shaped gasket for agarose free gel casting, uni-directional migration.

SUGGESTION

Order along with Ready-to-use system

Gel casting stand (E0133075), Glass plate stand (E0135045), Gel-sandwich opener (E6130257), Gel slicer (E6305150)

Slimpage and its spares and accessories

Item Description	Cat. No.	Unit
Slimpage, ready-to-use system.	E0100142	System
Slimpage, ready-to-use system, with agarose-free casting stand	E0100144	System
Clamps with screws (one pair)	E0105085	Set
Screws for clamps and cathodic electrode unit	E0106148	Set
Silicone gasket for cathodic electrode unit	E0109304	Piece
Comb 1.5 mm thick, PMMA, 4 wells, 10 mm deep, est. vol. 75 μ L/well (one pair)	E0114042	Piece
Comb 1.5 mm thick, PMMA, 6 wells, 10 mm deep, est. vol. 65 μ L/well (one pair)	E0114062	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	E0117852	Set
Notched and rectangular glass plate, 4 (w) x 8.5 (l) cm (one of each)	E0128082	Set
Notched and rectangular glass plate with bonded 1.5 mm spacers, 4 (w) x 8.5 (l) cm (one of each)	E0128083	Set
Gel-casting stand with binder clips	E0133075	Piece
Gel-casting stand with 'C' shaped rubber gasket for agarose free sealing	E0133077	System
C shaped rubber gasket for agarose free sealing	E0133078	Piece
Glass plate stand	E0135045	Piece

ECOPAGE

Gel size: 7 (w) x 8.5 (l) cm

- ✓ **Single sided model**
- ✓ **In-situ gel casting/ Casting stand**
- ✓ **Designed for optimum gel cooling**
- ✓ **No sample loss as uni-directional migration**

- ✓ **Gel thickness: 1.5 mm**
- ✓ **No. of wells: 8**
- ✓ **Buffer requirement: 100 mL**
- ✓ **10% SDS-PAGE run in 70 min**



Ecopage with casting stand (right)

Features of this apparatus

Economical

- Less buffer required by virtue of its compact design
- For faster separations the apparatus can be conveniently placed in the refrigerator due to its small footprint
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Durable PMMA combs, spacers & thick glass plates
- No electrolytic corrosion of male connector as base is resin filled
- Electrodes do not break or pit as they are protected and the platinum is >99.9% pure

Leak-Proof

- No leakage of upper tank buffer as silicone gasket is tough & resilient
- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing with agar in lower tank trough

Error Minimization

- No slippage of gel sandwich due to in-situ gel casting
- No migration of samples in wrong direction due to unidirectional feature
- Wells are not formed at a slant as combs sit leveled on spacers

Ready-to-use system includes

	E0200142	E0200144
1. Lower anodic tank fitted with male connector and electrodes	Y	Y
2. Cathodic electrode unit fitted with male connector & electrode	Y	Y
3. Resilient silicone gasket for cathodic electrode unit	Y	Y
4. Two notched and two rectangular glass plates	Y	Y
5. Four 1.5 mm thick, breakage resistant, rounded spacers	Y	Y
6. Two PMMA comb (1.5 mm thick, 8 wells, est. vol. 75 µL/well)	Y	Y
7. Set of clamps with screws	Y	Y
8. Gel-casting stand for single gel (One back plate, one front plate)	-	Y
9. C shaped rubber gasket for single gel of 1.5 mm	-	Y
10. Electrical cords with male & female connectors	Y	Y
11. Instruction manual	Y	Y

Ordering description

Ecopage (E0200142): Vertical electrophoresis single sided system of gel size 7 (w) x 8.5 (l) cm, 1.5 mm spacers, comb 1.5 mm. PMMA, 8 wells with male connectors, in situ gel casting, uni-directional migration.

Ecopage with Casting stand (E0200144): Vertical electrophoresis single sided system of gel size 7 (w) x 8.5 (l) cm, 1.5 mm spacers, comb 1.5 mm, PMMA, 8 wells with male connectors with agarose free casting stand, male connectors, casting stand with 'C' shaped gasket for agarose free gel casting, uni-directional migration.

SUGGESTION

Order along with Ready-to-use system

Gel casting stand (E0233075), Glass plate stand (E0235065), Gel-sandwich opener (E6130257), Gel slicer (E6305150)

Ecopage and its spares and accessories

Item Description	Cat. No.	Unit
Ecopage, ready-to-use system.	E0200142	System
Ecopage, ready-to-use system, with agarose-free casting stand	E0200144	System
Clamps with screws (one pair)	E0205085	Set
Screws for clamps and cathodic electrode unit	E0206148	Set
Silicone gasket for cathodic electrode unit	E0209304	Piece
Comb 1.5 mm thick, PMMA, 8 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	E0214082	Piece
Comb 1.5 mm thick, PMMA, 10 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	E0214102	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	E0217852	Set
Notched and rectangular glass plate, 7 (w) x 8.5 (l) cm (one of each)	E0228082	Set
Notched and rectangular glass plate, with bonded spacers, 7 (w) x 8.5 (l) cm (one of each)	E0228083	Set
Gel-casting stand with binder clips	E0233075	Piece
Gel-casting stand with 'C' shaped rubber gasket for agarose free sealing	E0233077	System
C shaped rubber gasket for agarose free sealing	E0233078	Piece
Glass plate stand	E0235065	Piece

MIDIPAGE

Gel size: 10 (w) x 10 (l) cm

- ✓ **Single sided model**
- ✓ **In-situ gel casting**
- ✓ **Designed for optimum gel cooling**
- ✓ **No sample loss as uni-directional migration**

- ✓ **Gel thickness: 1.5 mm**
- ✓ **No. of wells: 12**
- ✓ **Buffer requirement: 250 mL**
- ✓ **10% SDS-PAGE run in 85 mins**



Midipage

Features of this apparatus

Economical

- Less buffer required by virtue of its compact design
- For faster separations the apparatus can be conveniently placed in the refrigerator due to its small footprint
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Durable PMMA combs, spacers & thick glass plates
- No electrolytic corrosion of male connector as base is resin filled
- Electrodes do not break or pit as they are protected and the platinum is >99.9% pure

Leak-Proof

- No leakage of upper tank buffer as silicone gasket is tough & resilient
- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing with agar in lower tank trough

Error Minimization

- No slippage of gel sandwich due to in-situ gel casting
- No migration of samples in wrong direction due to unidirectional feature
- Wells are not formed at a slant as combs sit leveled on spacers

Ready-to-use system includes

1. Lower anodic tank fitted with male connector and electrodes
2. Cathodic electrode unit fitted with male connector & electrode
3. Resilient silicone gasket for cathodic electrode unit
4. Two notched and two rectangular glass plates
5. Four 1.5 mm thick, breakage resistant, rounded spacers
6. Two PMMA comb (1.5 mm thick, 12 wells, est. vol. 75 µL/well)
7. Set of clamps with screws
8. Gel-casting stand for single gel (One back plate, one front plate)
9. C shaped rubber gasket for single gel of 1.5 mm
10. Electrical cords with male & female connectors
11. Instruction manual

E0400142

Y
Y
Y
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Y

Ordering description

Midipage (E0400142): Vertical electrophoresis single sided system of gel size 10 (w) x 10 (l) cm, 1.5 mm spacers, comb 1.5 mm. PMMA, 12 wells with male connectors, in situ gel casting, uni-directional migration.

SUGGESTION

Order along with Ready-to-use system

Gel casting stand (E0433075), Glass plate stand (E0435065), Gel-sandwich opener (E6130257), Gel slicer (E6305150)

Midipage and its spares and accessories

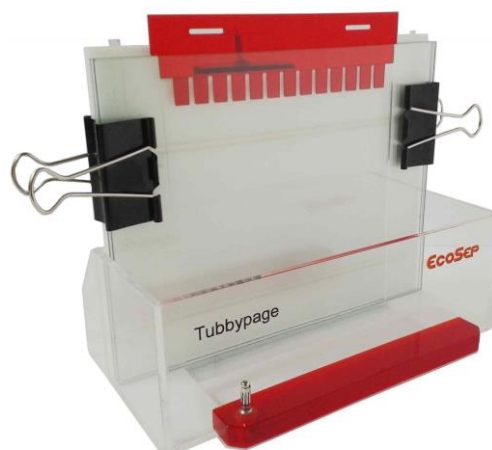
Item Description	Cat. No.	Unit
Midipage, ready-to-use system.	E0400142	System
Clamps with screws (one pair)	E0405100	Set
Screws for clamps and cathodic electrode unit	E0406148	Set
Silicone gasket for cathodic electrode unit	E0409304	Piece
Comb 1.5 mm thick, PMMA, 10 wells, 12 mm deep, est. vol. 75 uL/ well	E0414102	Piece
Comb 1.5 mm thick, PMMA, 12 wells, 12 mm deep, est. vol. 65 uL/ well	E0414122	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	E0417102	Set
Notched and rectangular glass plate, 14 (w) x 11 (l) cm (one of each)	E0414112	Set
Notched and rectangular glass plate, with bonded spacers, 14 (w) x 11 (l) cm (one of each)	E0414112	Set
Gel-casting stand with binder clips	E0433075	Piece
Glass plate stand	E0435065	Piece

TUBBYPAGE

Gel size: 14 (w) x 16 (l) cm

- ✓ **Single sided model**
- ✓ **In-situ gel casting (Agarose sealing)**
- ✓ **Designed for optimum gel cooling**
- ✓ **No sample loss as uni-directional migration**

- ✓ **Gel thickness: 1.5 mm**
- ✓ **No. of samples: 13**
- ✓ **Buffer requirement: 700 mL**
- ✓ **10% SDS-PAGE run in 2 hr 30 mins**



Tubbypage

Features of this apparatus

Leak Proof

- Gaskets made of silicone are tough & resilient
- Buffer leaks from plastic joints prevented as sticking is done with specially manufactured glues
- Leak proof patent pending gel casting stand

Rugged

- Breakage proof Teflon combs, & fibre-glass notched plate
- Electrodes do not break as they are thick & purity > than 99.9%
- No corrosion due to resin filled male connectors

High Resolution

- Sharper bands because of thin glass plates & deep tank
- Good cooling as entire gel-sandwich is in contact with the buffer
- Low positioned electrodes stir buffer to cool gel

Error Minimization

- Migration of samples in wrong direction prevented due to unidirectional feature
- Wells formed straight as combs sit levelled with the spacers

Ready-to-use system includes

1. Lower anodic tank fitted with male connector and electrodes
2. Cathodic electrode unit fitted with male connector & electrode
3. Resilient silicone gasket for cathodic electrode unit
4. Two notched and two rectangular glass plates
5. Four 1.5 mm thick, breakage resistant, rounded spacers
6. Two PMMA comb (1.5 mm thick, 20 wells, est. vol. 75 µL/well)
7. Set of clamps with screws
8. Gel-casting stand for single gel (One back plate, one front plate)
9. C shaped rubber gasket for single gel of 1.5 mm
10. Electrical cords with male & female connectors
11. Instruction manual

E0300142

Y
Y
Y
Y
Y
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Y
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-
Y
Y

Ordering description

Tubbypage (E0300142): Vertical electrophoresis single sided system of gel size 14 (w) x 16 (l) cm, 1.5 mm spacers, comb 1.5 mm. PMMA, 20 wells with male connectors, in situ gel casting, uni-directional migration.

SUGGESTION

Order along with Ready-to-use system

Gel casting stand (E0333075), Glass plate stand (E0335065), Gel-sandwich opener (E6130257), Gel slicer (E6305150)

Tubbypage and its spares and accessories

Item Description	Cat. No.	Unit
Tubbypage, ready-to-use system.	E0300142	System
Clamps with screws (one pair)	E0300585	Set
Screws for clamps and cathodic electrode unit	E0306148	Set
Silicone gasket for cathodic electrode unit	E0309304	Piece
Comb 1.5 mm thick, PMMA, 13 wells, 10 mm deep, est. vol. 140 uL/ well	E0314132	Piece
Comb 1.5 mm thick, PMMA, 20 wells, 10 mm deep, est. vol. 140 uL/ well	E0314202	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	E0317852	Set
Notched and rectangular glass plate, 20 (w) x 16.5 (l) cm (one of each)	E0328082	Set
Gel-casting stand with binder clips	E0333075	Piece
Glass plate stand	E0335065	Piece

ECONOMIC RANGE
ELECTRO BLOTTING APPARATUS
SALIENT FEATURES



Easy Assembly

- Cassette frames can be assembled easily with the help of guide pins
- No slippage during handling of cassette frame, sponge and gel due to locking nuts

Error Minimization

- No migration of samples in wrong direction due to unidirectional feature
- No wrong assembly of gel sandwich as engraved markings and unidirectional insertion prevent mistakes

Rugged

- No buffer leakage through plastic joints as bonding is done with special glues
- Electrodes do not break or pit as they are protected and the platinum is >99.9% pure
- No electrolytic corrosion of male connectors as base is resin filled

Economical

- Less buffer required
- Short run times as efficiency is higher
- No cold room required as it can be run in a fridge due to small foot print.
- Saves reagent & operator cost as leakage and errors are prevented

***ECONOMIC RANGE
ELECTRO BLOTTING APPARATUS
SELECTION GUIDE***

Model	Description	Gel Size (w) x (l) cm	Max. No. of Gels	Connector type	Unidirectional insertion of cassettes	Buffer required	Recommended power supply
NANOBLOT E1100060	For protein blotting	6 x 5	2	4 mm	Yes	250 mL	Beacon Spark
TUBBYBLOT E1300060	For protein blotting	16 x 14	2	4 mm	No	1000 mL	

* - Power supply is not a part of the ready-to-use system

NANOBLOT

For western blotting

Gel size: 6 (w) x 5 (l) cm

- ✓ Single cassette
- ✓ Uni-directional insertable cassettes and electrode plates
- ✓ Transfer one or two gels at a time
- ✓ Gel thickness: 1.5 mm
- ✓ Buffer requirement: 250 mL



Nanoblot with cassette (Right)

Features of this apparatus

Economical

- Less buffer required by virtue of its compact design
- Short run times as better efficiency of transfer current
- No cold room required as it can be run in the refrigerator
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- No buffer leakage through plastic joints as bonding is done with special glues
- No electrolytic corrosion of male connector as base is resin filled
- Electrodes do not break out pit as they are protected and the platinum is >99.9% pure

Easy Assembly

- Cassette frames can be assembled easily with help of guide pins
- No slippage during handling of cassette frame, sponge and gel due to locking nuts

Error Minimization

- No migration of samples in wrong direction due to unidirectional feature
- No wrong assembly of gel sandwich as engraved markings and unidirectional insertion prevent mistakes

Ready-to-use system includes

	E0400142
1. Tank	Y
2. Lid	Y
3. Gel & membrane holding cassette with guide pins, stoppers and locking units insertable in only one manner	Y
4. Two sponge pads	Y
5. Cathode and anode plates insertable in only one manner, with electrodes for uni-directional migration and male connectors	Y
6. Electrical cords with female & male connectors designed for user safety (one pair)	Y
7. Instruction manual	Y

Ordering description

Nanoblot (E1100060): Single cassette western blotting system, can accommodate two gels (gel size 6 (w) x 5 (l) cm with uni-directional migration and constructed for cassette and electrode plate insertion in the correct direction only.

Nanoblot and its spares and accessories

Item Description	Cat. No.	Unit
Nanoblot, ready-to-use system.	E1100060	System
Cathode and anode plates with male connectors (2mm), uni-directional insertion and migration feature	E1103063	Set
Gel membrane-holding cassette for transfer of anions with guide-pins, stoppers and locking-nuts	E1106504	Set
Sponge pads (Four)	E1110075	Packet
Guide pins with stoppers and locking nuts (two of each)	E1121304	packet

TUBBYBLOT

For western blotting

Gel size: 16 (w) x 14 (l) cm

- ✓ Single cassette
- ✓ Uni-directional insertable cassettes and electrode plates
- ✓ Transfer one or two gels at a time
- ✓ Gel thickness: 1.5 mm
- ✓ Buffer requirement: 2 L



Tubbyblot with cassette (Representational image)

Features of this apparatus

Economical

- Less buffer required by virtue of its compact design
- Short run times as better efficiency of transfer current
- No cold room required as it can be run in the refrigerator
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- No buffer leakage through plastic joints as bonding is done with special glues
- No electrolytic corrosion of male connector as base is resin filled
- Electrodes do not break out pit as they are protected and the platinum is >99.9% pure

Easy Assembly

- Cassette frames can be assembled easily with help of guide pins
- No slippage during handling of cassette frame, sponge and gel due to locking nuts

Error Minimization

- No migration of samples in wrong direction due to unidirectional feature
- No wrong assembly of gel sandwich as engraved markings and unidirectional insertion prevent mistakes

Ready-to-use system includes

	E1300060
1. Tank	Y
2. Lid	Y
3. Gel & membrane holding cassette with guide pins, stoppers and locking units insertable in only one manner	Y
4. Two sponge pads	Y
5. Cathode and anode plates insertable in only one manner, with electrodes for uni-directional migration and male connectors (2 mm)	Y
6. Electrical cords with female (2 mm) & male connectors designed for user safety (one pair)	Y
7. Instruction manual	Y

Ordering description

Tubbyblot (E1300060): Single cassette western blotting system, can accommodate two gels (gel size 16 (w) x 14 (l) cm with uni-directional migration and constructed for cassette and electrode plate insertion in the correct direction only

Tubbyblot and its spares and accessories

Item Description	Cat. No.	Unit
Tubbyblot, ready-to-use system.	E1300060	System
Cathode and anode plates with male connectors (4 mm), uni-directional insertion and migration feature	E1303063	Set
Gel membrane-holding cassette for transfer of anions with guide-pins, stoppers and locking-nuts	E1306504	Set
Sponge pads (Eight)	E1310075	Packet
Guide pins with stoppers and locking nuts (four of each)	E1321304	packet

ECONOMIC RANGE
HORIZONTAL GEL APPARATUS
SALIENT FEATURES



Leak-proof

- No buffer leakage through plastic joints as sticking is done with special glues
- Crazing of plastic minimized as high quality plastic tolerates short exposure to cleaning reagents used in RNA analysis

Error Minimization

- Closely spaced wells do not break as comb-stand will not move sideways during comb removal
- Samples migrate in right direction due to uni-directional migration feature and colour coding

Rugged

- Electrodes do not break as they are thick and platinum is >99.9% pure
- No electrolytic corrosion of male connector as base is resin filled
- Plastic screws that do not corrode over long usage times

Economical

- Run larger number of samples using multiple combs per tray
- Can be run at higher voltages for quicker runs and hence faster turn-around times
- Saves reagent & operator cost as leakage and errors are prevented

Good Resolution

- UV-transparent trays have more than 95% UV-transparency and gives enhanced sensitivity of DNA detection
- Improved band resolution as wells can be cast near the starting edge for longer running length

ECONOMIC RANGE
HORIZONTAL GEL APPARATUS
SELECTION GUIDE

Model	Gel size Width x Length (in cm)	No. of wells/ comb	Max. of samples at a time	Casting Stand	Tray transparency	Buffer requirement (mL)	Recommended power supply*
SLIMSUB E2100031	3 x 10	4	8	No	UV Opaque	100	Beacon Electravolt LightSaber Spark
SLIMSUB E2100032	3 x 10	4	8	Yes	UVT		
ECOSUB E2200071	7 x 10	8	16	No	UV Opaque	200	Beacon Electravolt LightSaber Spark
ECOSUB E2200072	7 x 10	8	16	Yes	UVT		
MIDISUB E2400101	10 x 10	15	30	No	UV Opaque	350	Beacon Spark
MIDISUB E2400102	10 x 10	15	30	Yes	UVT		
TUBBYSUB E2300151	15 x 10	15 / 20	30 / 40	No	UV Opaque	500	Beacon Spark
TUBBYSUB E2300152	15 x 10	15 / 20	30 / 40	Yes	UVT		
HUNKYSUB E2500201	20 x 20	30	120	No	UV Opaque	1500	Beacon Spark
HUNKYSUB E2500202	20 x 20	30	120	No	UVT		

No. of wells per comb is as per the standard comb available with the ready to use system. This number is an indicative number. The number of wells per comb can be customized to be more or less than this number.

* - Power supply is not a part of the ready-to-use system

UVT - Transparent to UV light (Tray can be placed directly on UV source for viewing)

SLIMSUB

With UV opaque tray

SLIMSUB

With UV transparent tray



Slimsub

- ✓ **Uni-directional migration**
- ✓ **For DNA and protein separations**
- ✓ **Gel size: 3 (w) x 10 (l) cm**
- ✓ **No. of samples: [4* - 6] x 2 combs**
- ✓ **Buffer requirement: 100 mL**

**with ready-to-use system*

Features of this apparatus

Economical

- Run larger number of samples per gel
- Less buffer required by virtue of its compact design
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Electrodes do not break or pit as they are protected and the platinum is >99.9% pure
- Durable PMMA combs
- No electrolytic corrosion of male connector as base is resin filled

Leak-Proof

- No leakage as tank is a single molded piece (Slimsub, Ecosub)
- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing our innovative casting stands

Error Minimization

- Comb removal design minimizes well separator breakage
- No migration of samples in wrong direction due to unidirectional feature
- Wells are properly formed as the combs sit levelled on the tray

Ready-to-use system includes

1. Moulded tank fitted with removable electrodes and male connectors
2. UV-opaque for gel size 3 (w) x 10 (l) cm with slots for positioning two combs
3. UV-transparent for gel size 3 (w) x 10 (l) cm with slots for positioning two combs
4. Two PMMA combs (4 wells, 1.5 mm thick)
5. Lid
6. Gel casting stand for tray of width 3 cm length 10 cm
7. Electrical cords with male & female connectors designed for user safety (one pair)
8. Instruction manual

	E2100031	E2100032
1.	Y	Y
2.	Y	-
3.	-	Y
4.	Y	Y
5.	Y	Y
6.	-	Y
7.	Y	Y
8.	Y	Y

Ordering description

Slimsub (E2100031): Horizontal apparatus with regular thickness electrodes, 2 mm male connectors, uni-directional migration & **UV-opaque tray**, Gel size 3 (w) x 10 (l) cm, two combs 1.5 mm, PMMA, 4 wells.

Slimsub (E2100032): Horizontal apparatus with regular thickness electrodes, 2 mm male connectors, uni-directional migration & **UV-transparent tray**, Gel size 3 (w) x 10 (l) cm, two combs 1.5 mm, PMMA, 4 wells and tape-free gel casting stand.

SUGGESTION

Order along with Ready-to-use system

Extra trays (E2103103, E2103104),
Extra combs (E2110042),
Gel slicer (E6305150)

Slimsub and its spares and accessories

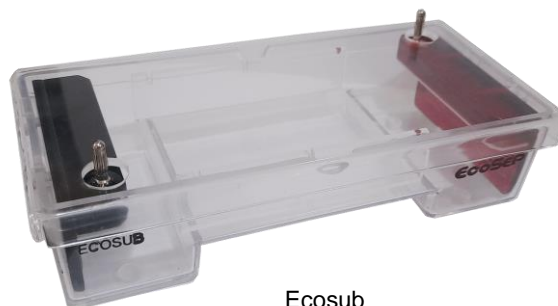
Item Description	Cat. No.	Unit
Slimsub, ready-to-use system, with UV-opaque tray	E2100031	System
Slimsub, ready-to-use system, with UV-transparent tray	E2100032	System
Cathode (black) and anode (red) electrode plates	E2101054	Set
UV-opaque tray [gel size: 3 (w) x 5 (l) cm]	E2103053	Piece
UV-transparent tray [gel size: 3 (w) x 5 (l) cm]	E2103054	Piece
UV-opaque tray [gel size: 3 (w) x 10 (l) cm]	E2103103	Piece
UV-transparent tray [gel size: 3 (w) x 10 (l) cm]	E2103104	Piece
Comb 1.5 mm, PMMA, 4 wells/ 28 mm	E2110042	Piece
Comb 1.5 mm, PMMA, 6 wells/ 28 mm	E2110062	Piece
Gel casting stand for tray max width 3 cm (w) and length 10 cm	E2150031	Piece

ECOSUB

With UV opaque tray

ECOSUB

With UV transparent tray



Ecosub

- ✓ **Uni-directional migration**
- ✓ **For DNA and protein separations**
- ✓ **Gel size: 7 (w) x 10 (l) cm**
- ✓ **No. of samples: [8* - 10] x 2 combs**
- ✓ **Buffer requirement: 200 mL**

**with ready-to-use system*

Features of this apparatus

Economical

- Run larger number of samples per gel
- Less buffer required by virtue of its compact design
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Electrodes do not break or pit as they are protected and the platinum is >99.9% pure
- Durable PMMA combs
- No electrolytic corrosion of male connector as base is resin filled

Leak-Proof

- No leakage as tank is a single molded piece (Slimsub, Ecosub)
- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing our innovative casting stands

Error Minimization

- Comb removal design minimizes well separator breakage
- No migration of samples in wrong direction due to unidirectional feature
- Wells are properly formed as the combs sit levelled on the tray

Ready-to-use system includes

1. Moulded tank fitted with removable electrodes and male connectors
2. UV-opaque tray for gel size 7 (w) x 10 (l) cm with slots for positioning two combs
3. UV-transparent tray for gel size 7 (w) x 10 (l) cm with slots for positioning two combs
4. Two PMMA combs (8 wells, 1.5 mm thick)
5. Lid
6. Gel casting stand for tray of width 7 cm length 10 cm
7. Electrical cords with male & female connectors designed for user safety (one pair)
8. Instruction manual

	E2200071	E2200072
1.	Y	Y
2.	Y	-
3.	-	Y
4.	Y	Y
5.	Y	Y
6.	-	Y
7.	Y	Y
8.	Y	Y

Ordering description

Ecosub (E2200071): Horizontal apparatus with regular thickness electrodes, 2 mm male connectors, uni-directional migration & **UV-opaque tray**, Gel size 7 (w) x 10 (l) cm, two combs 1.5 mm, PMMA, 8 wells.

Ecosub (E2200072): Horizontal apparatus with regular thickness electrodes, 2 mm male connectors, uni-directional migration & **UV-transparent tray**, Gel size 7 (w) x 10 (l) cm, two combs 1.5 mm, PMMA, 8 wells and tape-free gel casting stand..

SUGGESTION

Order along with Ready-to-use system

Extra trays (E2203101,
E2203102, E2203103, E2203104),
Extra combs (E2210082, E2110042),
Gel slicer (E6305150)

Ecosub and its spares and accessories

Item Description	Cat. No.	Unit
Ecosub, ready-to-use system, with UV-opaque tray	E2200071	System
Ecosub, ready-to-use system, with UV-transparent tray	E2200072	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	E2201054	Set
UV-opaque tray [gel size: 7 (w) x 5 (l) cm]	E2203051	Piece
UV-transparent tray [gel size: 7 (w) x 5 (l) cm]	E2203052	Piece
UV-opaque tray [gel size: 7 (w) x 10 (l) cm]	E2203101	Piece
UV-transparent tray [gel size: 7 (w) x 10 (l) cm]	E2203102	Piece
Comb 1.5 mm, PMMA, 8 wells/ 68 mm	E2210082	Piece
Comb 1.5 mm, PMMA, 10 wells/ 68 mm	E2210102	Piece
Gel casting stand for tray max width 7 cm (w) and length 10 cm	E2250071	Piece

MIDISUB

With UV opaque tray

MIDISUB

With UV transparent tray

- ✓ **Uni-directional migration**
- ✓ **For DNA and protein separations**
- ✓ **Gel size: 10 (w) x 10 (l) cm**
- ✓ **No. of samples: [15* - 20] x 2 combs**
- ✓ **Buffer requirement: 350 mL**

**with ready-to-use system*



Midisub

Features of this apparatus

Economical

- Run larger number of samples per gel
- Less buffer required by virtue of its compact design
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Electrodes do not break or get pit as they are protected and the platinum is >99.9% pure
- Durable PMMA combs
- No electrolytic corrosion of male connector as base is resin filled

Leak-Proof

- No leakage as tank is a single molded piece (Slimsub, Ecosub)
- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing our innovative casting stands

Error Minimization

- Comb removal design minimizes well separator breakage
- No migration of samples in wrong direction due to unidirectional feature
- Wells are properly formed as the combs sit levelled on the tray

Ready-to-use system includes

	E2400101	E2400102
1. Moulded tank fitted with removable electrodes and male connectors	Y	Y
2. UV-opaque tray for gel size 10 (w) x 10 (l) cm with slots for positioning two combs	Y	-
3. UV-transparent tray for gel size 10 (w) x 10 (l) cm with slots for positioning two combs	-	Y
4. Two PMMA combs (15 wells, 1.5 mm thick)	Y	Y
5. Lid	Y	Y
6. Gel casting stand for tray of width 3 cm length 10 cm	-	Y
7. Electrical cords with male & female connectors designed for user safety (one pair)	Y	Y
8. Instruction manual	Y	Y

Ordering description

Midisub (E2400101): Ready-to-use system with **UV-opaque tray**, apparatus with male connectors, uni-directional migration, removable electrodes.

Tray for gel size 10 (w) x 10 (l) cm, two combs (1.5 mm, PMMA, 15 wells).

Midisub (E2400102): Ready-to-use system with **UV-transparent tray**, apparatus with male connectors, uni-directional migration, removable electrodes.

Tray for gel size 10 (w) x 10 (l) cm, 1 Tray for gel size 3 (w) x 10 (l),

Two combs (1.5 mm, PMMA, 15 wells), 2 combs (1.5 mm, PMMA, 15 wells),

with tape-free gel casting stand.

SUGGESTION

Order along with Ready-to-use system

Extra trays (E2403101, E2403102),
Extra combs (E2410152),
Gel slicer (E6305150)

Midisub and its spares and accessories

Item Description	Cat. No.	Unit
Midisub, ready-to-use system, with UV-opaque tray	E2400101	System
Midisub, ready-to-use system, with UV-transparent tray	E2400102	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	E2401554	Set
UV-opaque tray [gel size: 10 (w) x 5 (l) cm]	E2403051	Piece
UV-transparent tray [gel size: 10 (w) x 5 (l) cm]	E2403052	Piece
UV-opaque tray [gel size: 10 (w) x 10 (l) cm]	E2403101	Piece
UV-transparent tray [gel size: 10 (w) x 10 (l) cm]	E2403102	Piece
Comb 1.5 mm, PMMA, 12 wells	E2410122	Piece
Comb 1.5 mm, PMMA, 15 wells	E2410152	Piece
Gel casting stand for tray max width 10 cm (w) and length 10 cm	E2450101	Piece

TUBBYSUB

With UV opaque tray

TUBBYSUB

With UV transparent tray

- ✓ **Uni-directional migration**
- ✓ **For DNA and protein separations**
- ✓ **Gel size: 15 (w) x 10 (l) cm**
- ✓ **No. of samples: [15* - 25] x 2 combs**
- ✓ **Buffer requirement: 500 mL**

**with ready-to-use system*



Tubbysub

Features of this apparatus

Economical

- Run larger number of samples per gel
- Less buffer required by virtue of its compact design
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Electrodes do not break or pit as they are protected and the platinum is >99.9% pure
- Durable PMMA combs
- No electrolytic corrosion of male connector as base is resin filled

Leak-Proof

- No leakage as tank is a single molded piece (Slimsub, Ecosub)
- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing our innovative casting stands

Error Minimization

- Comb removal design minimizes well separator breakage
- No migration of samples in wrong direction due to unidirectional feature
- Wells are properly formed as the combs sit levelled on the tray

Ready-to-use system includes

1. Tank fitted with removable electrodes and male connectors
2. UV-opaque for gel size 15 (w) x 10 (l) cm with slots for positioning two combs
3. UV-transparent for gel size 15 (w) x 10 (l) cm with slots for positioning two combs
4. Two PMMA combs (20 wells, 1.5 mm thick)
5. Lid
6. Gel casting stand for tray of width 7 cm length 10 cm
7. Electrical cords with male & female connectors designed for user safety (one pair)
8. Instruction manual

	E2300151	E2300152
1.	Y	Y
2.	Y	
3.		Y
4.	Y	Y
5.	Y	Y
6.		Y
7.	Y	Y
8.	Y	Y

Ordering description

Tubbysub (E2300151): Ready-to-use system with **UV-opaque tray**, apparatus with male connectors, uni-directional migration, removable electrodes.

Tray for gel size 15 (w) x 10 (l) cm and Comb (1.5 mm, PMMA, 20 wells)

Tubbysub (E2300152): Ready-to-use system with **UV-transparent tray**, apparatus with male connectors, uni-directional migration, removable electrodes.

Tray for gel size 15 (w) x 10 (l) cm and Comb (1.5 mm, PMMA, 20 wells), with tape-free gel casting stand.

SUGGESTION

Order along with Ready-to-use system

Extra trays (E2303055, E2303056, E2303105, E2303106),
Extra combs (E2310152, E2310202),
Gel slicer (E6305150)

Tubbysub and its spares and accessories

Item Description	Cat. No.	Unit
Tubbysub, ready-to-use system, with UV-opaque tray	E2300151	System
Tubbysub, ready-to-use system, with UV-transparent tray, with tape-free casting stand	E2300152	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	E2301554	Set
UV-opaque tray [gel size: 15 (w) x 5 (l) cm]	E2303055	Piece
UV-transparent tray [gel size: 15 (w) x 5 (l) cm]	E2303056	Piece
UV-opaque tray [gel size: 15 (w) x 10 (l) cm]	E2303105	Piece
UV-transparent tray [gel size: 15 (w) x 10 (l) cm]	E2303106	Piece
Comb, 1.5 mm, PMMA, 15 wells	E2310152	Piece
Comb, 1.5 mm, PMMA, 20 wells	E2310202	Piece
Gel casting stand for tray max width 15 cm (w) and length 10 cm	E2350151	Piece

HUNKYSUB

With UV opaque tray

HUNKYSUB

With UV transparent tray



Hunkysub

- ✓ **Uni-directional migration**
- ✓ **For DNA and protein separations**
- ✓ **Gel size: 20 (w) x 20 (l) cm**
- ✓ **No. of samples: [30* - 45] x 4 combs**
- ✓ **Buffer requirement: 1500 mL**

**with ready-to-use system*

Features of this apparatus

Economical

- Run larger number of samples per gel
- Less buffer required by virtue of its compact design
- Saves reagent & operator cost as leakage & errors are prevented

Rugged

- Electrodes do not break or pit as they are protected and the platinum is >99.9% pure
- Durable PMMA combs
- No electrolytic corrosion of male connector as base is resin filled

Leak-Proof

- No leakage from plastic joints as bonding is done with special glues
- Leak-proof sealing of our innovative casting stands makes sure there is no gel leakage while casting

Error Minimization

- Comb design minimizes well separator breakage
- No migration of samples in wrong direction due to unidirectional feature
- Wells are properly formed as the combs sit levelled on the tray

Ready-to-use system includes

1. Tank fitted with removable electrodes and male connectors
2. UV-opaque for gel size 20 (w) x 20 (l) cm with slots for positioning two combs
3. UV-transparent for gel size 20 (w) x 20 (l) cm with slots for positioning two combs
4. Two PMMA combs (30 wells, 1.5 mm thick)
5. Lid
6. Gel casting stand for tray of width 20 cm length 20 cm
7. Electrical cords with male & female connectors designed for user safety (one pair)
8. Instruction manual

	E2500201	E2500202
1.	Y	Y
2.	Y	-
3.	-	Y
4.	Y	Y
5.	Y	Y
6.	-	Y
7.	Y	Y
8.	Y	Y

Ordering description

Hunkysub (E2500201): Ready-to-use system with **UV-opaque tray**, apparatus with male connectors, uni-directional migration, removable electrodes.
Tray for gel size 20 (w) x 20 (l) cm and Comb (1.5 mm, PMMA, 30 wells)

Hunkysub (E2500202): Ready-to-use system with **UV-transparent tray**, apparatus with male connectors, uni-directional migration, removable electrodes.
Tray for gel size 20 (w) x 20 (l) cm and Comb (1.5 mm, PMMA, 30 wells), with tape-free gel casting stand.

SUGGESTION

Order along with Ready-to-use system

Extra trays (E2503055, E2503056, E2503105, E2503106),
Extra combs (E2510252, E2510402),
Gel slicer (E6305150)

Hunkysub and its spares and accessories

Item Description	Cat. No.	Unit
Hunkysub, ready-to-use system, with UV-opaque tray	E2500201	System
Hunkysub, ready-to-use system, with UV-transparent tray, with tape-free casting stand	E2500202	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	E2501554	Set
UV-opaque tray [gel size: 20 (w) x 5 (l) cm]	E2503055	Piece
UV-transparent tray [gel size: 20 (w) x 5 (l) cm]	E2503056	Piece
UV-opaque tray [gel size: 20 (w) x 10 (l) cm]	E2503105	Piece
UV-transparent tray [gel size: 20 (w) x 10 (l) cm]	E2503106	Piece
UV-opaque tray [gel size: 20 (w) x 15 (l) cm]	E2503155	Piece
UV-transparent tray [gel size: 20 (w) x 15 (l) cm]	E2503156	Piece
UV-opaque tray [gel size: 20 (w) x 20 (l) cm]	E2503205	Piece
UV-transparent tray [gel size: 20 (w) x 20 (l) cm]	E2503206	Piece
Comb, 1.5 mm, PMMA, 25 wells	E2510252	Piece
Comb, 1.5 mm, PMMA, 30 wells	E2510302	Piece
Comb, 1.5 mm, PMMA, 40 wells	E2510402	Piece
Comb, 1.5 mm, PMMA, 45 wells	E2510452	Piece
Gel casting stand for tray max width 20 cm (w) and length 20 cm	E2550151	Piece

***ECONOMIC RANGE
POWER SUPPLIES
SALIENT FEATURES***



Rugged

- Reduced probability of transistor burnout as MOSFET's with high voltage & current capacity
- Instantaneous voltage stabilization, input voltage spikes reduced
- Large operating temperature range (0° C to +40° C)

Convenient

- Small foot print due to low EMI radiation of transformer
- Customizable to have multiple outputs in parallel
- Low heat dissipation, can be put in a fridge
- Easy to use with reduced operator input required

Safety

- No shock from accidental contact with single output due to use of plastic body
- Short circuit proof
- CE certified
- Low EMI radiation

Economical

- Multiple apparatus of similar resistance can be run
- Reduced maintenance and repairing cost as low probability of burnouts and short circuits
- Less than 10% dissipation of energy as heat
- No/ few moving parts which may need replacements over a period of time

***ECONOMIC RANGE
POWER SUPPLIES
SELECTION GUIDE***

Model	Type	Voltage Range	Current Range	No. of outputs	Application	Best with ES models
Beacon	Two fixed voltages	80, 140 V	upto 250 mA	1	Small & medium verticals & horizontals	Slimpage, Ecopage, Midipage, Tubbypage, Slimsub, Ecosub, Midisub, Tubbysub, Nanoblot, Tubbyblot
Electravolt 2.0	Four fixed voltages	80, 110, 140, 200 V	upto 150 mA	1	Small verticals & horizontals	Slimpage, Ecopage, Slimsub
Electravolt 3.0	Four fixed voltages	50, 100, 150, 200 V	upto 150 mA	1	Small verticals & horizontals	Slimpage, Ecopage, Slimsub
LightSaber	Variable voltage	50-200 V	0-150 mA	2	Small verticals & horizontals	Slimpage, Ecopage, Slimsub, Ecosub,
Spark	Variable voltage	25-250 V	upto 300 mA	2	Small & medium verticals & horizontals	Slimpage, Ecopage, Midipage, Tubbypage, Slimsub, Ecosub, Midisub, Tubbysub, Nanoblot, Tubbyblot

Power supplies include power cords for connecting to the mains.
They do not include cords for connecting to the instrument.

BEACON

- ✓ **Corrosion resistant body**
- ✓ **Negligible voltage dip on connecting to electrophoresis unit**
- ✓ **Standard electrodes & 4 mm connectors**
Compatible with all regular equipment
- ✓ **Output voltage: 80 V, 140 V**
- ✓ **Max current: 250 mA**



Beacon

Features of this apparatus

Economical

- Less space required by virtue of its compact design
- Achieve short run times due to high current capacity
- No cold room required as power packs can be connected in the refrigerator*

Rugged

- Made of thick quality plastic
- Slow blow fuse to safe guard the transformer
- No corrosion on the body as it is resistant

Easy-To-Use

- Easy to use 4 mm banana plug connectors
- Easy to choose selector switch and/ or knobs

Error Minimization

- Made of shock proof plastic body
- Color coded to avoid errors
- Slow blow fuse to protect the transformer

Ordering description

Beacon (E4100020): Power supply, Range 80 V, 140 V, single output

SUGGESTION

Order along with Ready-to-use system
Ecopage, Slimpage, Ecosub, Slimsub.

Complete Specifications

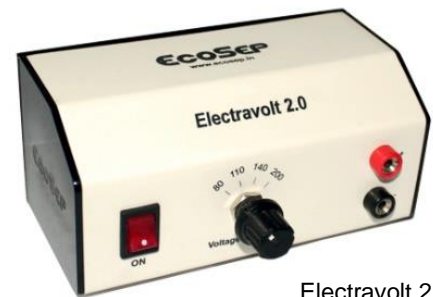
Details	Beacon
Voltage Outputs	80V, 140V
Current Output	Upto 250 mA DC
No. of Outputs	1
Power (Wattage)	35W
Voltage Adjustment	Via rocker switch
Current Adjustment	None
Mode of Regulation	Constant voltage, current limited
Voltage Indicator	None
Timer	None
Autorecovery on power failure	Yes
Set point stays indefinitely	
Operating temperature range	0°C to +40°C
Voltage input	230 rms, 50 Hz, single phase
Frequency	47 Hz to 53 Hz
Transient suppression provided	Yes
Component details	
Mains switch	Illuminated rocker switch
Fuse	1A, internal
Output socket	4 mm female on front panel
Mains inlet	2 pin on side panel
Line regulation in CV mode	Better than +/- 5%
Load regulation in: no load to full load variation (in CV mode)	Better than 10% for 10%-100% load variation or vice versa
Ripple and noise in CV mode	Less than 5% peak to peak at highest output voltage
Overload protection	None Blinking light indicates overload
Short circuit protection	Transient protection
Overvoltage protection	None
Isolation	2.1KV AC for 1 min
- between AC input & DC output terminals	
- between DC output terminals and chassis	500V AC for 1 min
Insulation	100 Mohms @ 50 DC
- between DC output a& chassis	
Humidity tolerance	upto 95% (non condensing)
Cooling	By normal convection, venting at the back and sides
Dimensions of the body [measurement excludes projecting knobs, handles and switches]	75 mm (w)x 150 mm (h)x 75 mm (d)

Electravolt Series

- ✓ **Fixed voltage range**
- ✓ **Corrosion resistant body**
- ✓ **Negligible voltage dip on connecting to electrophoresis unit**

Electravolt 2.0

- ✓ **Output voltage: 80 V, 110 V, 140 V, 200 V**
- ✓ **Max current: 150 mA**



Electravolt 2.0

Electravolt 3.0

- ✓ **Output voltage: 50 V, 100 V, 150 V, 200 V**
- ✓ **Max current: 150 mA**



Electravolt 3.0

Features of this apparatus

Economical

- Less space required by virtue of its compact design
- Achieve short run times due to high current capacity
- No cold room required as power packs can be connected in the refrigerator*

Rugged

- Made of thick quality plastic
- Slow blow fuse to safe guard the transformer
- No corrosion on the body as it is resistant

Easy-To-Use

- Easy to use 4 mm banana plug connectors
- Easy to choose selector switch and/ or knobs

Error Minimization

- Made of shock proof plastic body
- Color coded to avoid errors
- Slow blow fuse to protect the transformer

Ordering description

Electravolt 2.0 (E4100080): Power supply, Range 80 V, 110 V, 140 V, 200 V, single output

Electravolt 3.0 (E4100050): Power supply, Range 50 V, 100 V, 150 V, 200 V, single output

SUGGESTION

Order along with Ready-to-use system
Ecopage, Slimpage, Ecosub, Slimsub.

Complete Specifications

Details	Electravolt 2.0	Electravolt 3.0
Voltage Outputs	80 V 110 V 140 V 200 V	50 V 100 V 150 V 200 V
Current Output	upto 150 mA DC	upto 150 mA DC
No. of Outputs	1	1
Power (Wattage)	30 W	30 W
Voltage Adjustment	Via rotary switch	Via rotary switch
Current Adjustment	None	None
Mode of Regulation	Constant voltage, current limited	Constant voltage, current limited
Voltage Indicator	None	None
Timer	None	None
Autorecovery on power failure Set point stays indefinitely	Yes	Yes
Operating temperature range	0Å°C to +40Å°C	0Å°C to +40Å°C
Voltage input	230 rms, 50 Hz, single phase	230 rms, 50 Hz, single phase
Frequency	47 Hz to 53 Hz	47 Hz to 53 Hz
Transient suppression provided	Yes	Yes
Component details Mains switch Fuse Output socket Mains inlet	Illuminated rocker switch 1A, internal 4 mm female on front panel 2 pin on side panel	Illuminated rocker switch 1A, internal 4 mm female on front panel 2 pin on side panel
Line regulation in CV mode	Better than +/- 5%	Better than +/- 5%
Load regulation in: no load to full load variation (in CV mode)	Better than 10% for 10%-100% load variation or vice versa	Better than 10% for 10%-100% load variation or vice versa
Ripple and noise in CV mode	Less than 5% peak to peak at highest output voltage	Less than 5% peak to peak at highest output voltage
Overload protection	None Blinking light indicates overload	None Blinking light indicates overload
Short circuit protection	Transient protection	Transient protection
Overvoltage protection	None	None
Isolation - between AC input & DC output terminals - between DC output terminals and chassis	2.1KV AC for 1 min 500V AC for 1 min	2.1KV AC for 1 min 500V AC for 1 min
Insulation - between DC output & chassis	100 Mohms @ 50 DC	100 Mohms @ 50 DC
Humidity tolerance	upto 95% (non condensing)	upto 95% (non condensing)
Cooling	By normal convection, venting at the bottom and sides	By normal convection, venting at the bottom and sides
Dimensions of the body [measurement excludes projecting knobs, handles and switches]	150 mm (w) x 75 mm (h) x 75 mm (d)	150 mm (w) x 75 mm (h) x 75 mm (d)

LIGHTSABER

- ✓ **Corrosion resistant body**
- ✓ **Display for voltage**
- ✓ **Negligible voltage dip on connecting to electrophoresis unit**
- ✓ **Output voltage: 50 – 200 V**
- ✓ **Max current: 150 mA**



Lightsaber

Features of this apparatus

Economical

- Less space required by virtue of its compact design
- Achieve short run times due to high current capacity
- No cold room required as power packs can be connected in the refrigerator*

Rugged

- Made of thick quality plastic
- Slow blow fuse to safe guard the transformer
- No corrosion on the body as it is resistant

Easy-To-Use

- Easy to use 4 mm banana plug connectors
- Easy to choose selector switch and/ or knobs

Error Minimization

- Made of shock proof plastic body
- Color coded to avoid errors
- Slow blow fuse to protect the transformer

Ordering description

Lightsaber (E4100030): Power supply, Range 50-200 V, upto 150 mA, dual output, LED display for voltage and current, with CV, CC and autocrossover.

SUGGESTION

Order along with Ready-to-use system
Ecopage, Slimpage, Ecosub, Slimsub.

Complete Specifications

Details	Lightsaber
Voltage Output	50-200 V
Current Output	0 - 150 mA DC
Number of Outputs	2
Power (Wattage)	30 W
Voltage Adjustment	1 V increment via one turn knob
Current Adjustment	1 mA increment via one trun knob
Mode of Regulation	Constant voltage, current limited
Voltage Indicator	On front panel 3.5 digit voltmeter
Timer	None
Autorecovery on power failure Set point stays indefinitely	Yes
Operating temperature range	0°C to +40°C
Voltage input	230 rms, 50 Hz, single phase
Frequency	47 Hz to 53 Hz
Transient suppression provided	Yes
Component details Mains switch Fuse Output socket Mains inlet	Illuminated rocker switch 1A, on back panel 4 mm female on front panel IEC C14 on back panel
Line regulation in CV mode	Better than +/- 2%
Load regulation in: no load to full load variation (in CV mode)	Better than 10% for 10%-100% load variation or vice versa
Ripple and noise in CV mode	Less than 1% peak to peak at highest output voltage
Overload protection	Manual recovery after removal of overload
Short circuit protection	Latched shutdown type
Overvoltage protection	Latched shutdown type at 15% approx. over set output voltage
Isolation - between AC input & DC output terminals - between DC output terminals and chassis	2.1KV AC for 1 min 500V AC for 1 min
Insulation - between DC output a& chassis	100 Mohms @ 50 DC
Humidity tolerance	upto 95% (non condensing)
Cooling	By fan, venting at the bottom, back and sides
Dimensions of the body [measurement excludes projecting knobs, handles and switches]	196 mm (w) x 81 mm (h) x 132 mm (d)

SPARK

- ✓ **Corrosion resistant body**
- ✓ **Display for voltage**
- ✓ **Negligible voltage dip on connecting to electrophoresis unit**
- ✓ **Output voltage: 25 – 250 V**
- ✓ **Max current: 300 mA**



Spark

Features of this apparatus

Economical

- Less space required by virtue of its compact design
- Achieve short run times due to high current capacity
- No cold room required as power packs can be connected in the refrigerator*

Rugged

- Made of thick quality plastic
- Slow blow fuse to safe guard the transformer
- No corrosion on the body as it is resistant

Easy-To-Use

- Easy to use 4 mm banana plug connectors
- Easy to choose selector switch and/ or knobs

Error Minimization

- Made of shock proof plastic body
- Color coded to avoid errors
- Slow blow fuse to protect the transformer

Ordering description

Spark (E4100150): Power supply, Range 25-250 V, upto 300 mA, dual output

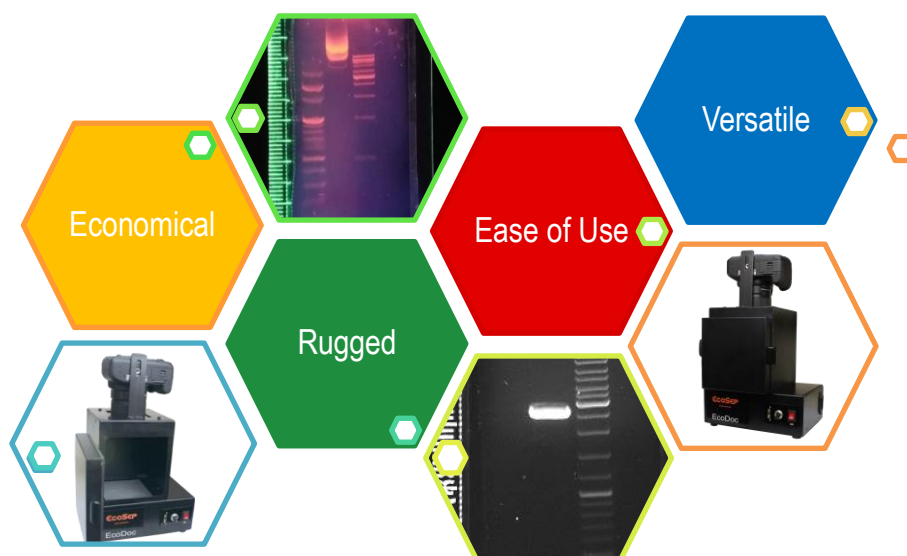
SUGGESTION

Order along with Ready-to-use system
Ecopage, Slimpage, Ecosub, Slimsub.

Complete Specifications

Details	Spark
Voltage Output	25-250 V
Current Output	0 - 300 mA DC
Number of Outputs	2
Power (Wattage)	75 W
Voltage Adjustment	1 V increment via one turn knob
Current Adjustment	None
Mode of Regulation	Constant voltage, current limited
Voltage Indicator	On front panel 3.5 digit voltmeter
Timer	None
Autorecovery on power failure Set point stays indefinitely	Yes
Operating temperature range	0°C to +40°C
Voltage input	230 rms, 50 Hz, single phase
Frequency	47 Hz to 53 Hz
Transient suppression provided	Yes
Component details Mains switch Fuse Output socket Mains inlet	Illuminated rocker switch 1A, on back panel 4 mm female on front panel IEC C14 on back panel
Line regulation in CV mode	Better than +/- 2%
Load regulation in: no load to full load variation (in CV mode)	Better than 10% for 10%-100% load variation or vice versa
Ripple and noise in CV mode	Less than 1% peak to peak at highest output voltage
Overload protection	Manual recovery after removal of overload
Short circuit protection	Latched shutdown type
Overvoltage protection	Latched shutdown type at 15% approx. over set output voltage
Isolation - between AC input & DC output terminals - between DC output terminals and chassis	2.1KV AC for 1 min 500V AC for 1 min
Insulation - between DC output a& chassis	100 Mohms @ 50 DC
Humidity tolerance	upto 95% (non condensing)
Cooling	By fan, venting at the bottom, back and sides
Dimensions of the body [measurement excludes projecting knobs, handles and switches]	175 mm (w) x 140 mm (h) x 125 mm (d)

***ECONOMIC RANGE
GEL DOCUMENTATION SYSTEMS
SALIENT FEATURES***



Rugged

- Rust free aluminium body with high quality powder coating is used
- Long life tubes > than 3000 hours of operation without damaging the filter or tubes
- No corrosion of filters or rusting as high quality materials have been used

Ease of use

- Computer controllable camera with multiple user facility
- Simple camera alignment
- Small size of the base occupies less space on the lab bench and allows easy access and movement.

Economical

- Smaller filters and tubes to reduce cost
- Simple DSLR camera to ensure low cost but great performance
- PMMA filters for UVA tubes
- Saves cost as simple components and spares are used.

Verstile

- Can be operated with any camera which can accept 58 mm filters
- Upgradable to multiple types of UV wavelengths and different types of bandpass filters
- Easy to change low-cost filters for different DNA binding dyes

***ECONOMIC RANGE
GEL DOCUMENTATION SYSTEMS
SELECTION GUIDE***

Model	Window Size		No. of UVA tubes	UV tube wattage	Camera type	Camera MP	White light source
	width (cm)	depth (cm)					
ECODOC 1 E3560500	10	10	4	4 W each	Computer controllable	18 MP	Optional
ECODOC 1 E3561000	18	15	6	6 W each	Computer controllable	18 MP	Optional

All EcoDocs come along with a red filter on the camera. For visualizing dyes other than EtBr, enquire by sending us an email at sales@techresource.in regarding the filter required.

ECODOC 1

Gel documentation system

- ✓ UV-transparent diffuser window, 10 x 10 cm
- ✓ Switch for dual intensity of UV-light
- ✓ Compact viewing hood
- ✓ Door to manually access gel for band excision
- ✓ Trans-illumination for taking images in the UV range
- ✓ 366 nm UVA tubes (4 W, 4 tubes)



EcoDoc 1

Features of this apparatus

Rugged

- Non-brittle filter made of plastic which does not crack easily
- No solarization i.e., UV-transparency of UV-transparent diffuser window is unchanged over time

High Sensitivity

- Visual detection limit 1 ng per compact band of EtBr stained dsDNA due to intensity of UVA tubes
- UV-transparent diffuser allows 85-90% of the UV to pass through
- Dual (Hi-Lo) mode for viewing. Go to Hi-mode only when required

Safety

- No skin burns or damage to normal retina's as UVA tubes emit light similar to light found outdoors
- Negligible phot-nicking or photo-bleaching of DNA due to use of lower energy UVA tubes

Economical

- Low capital cost and spares
- Does not need costly UV-transparent violet filter

Ready-to-use system includes

1. Lower housing unit with a UV-transparent window
2. Four UVA-tubes of 4 W each
3. A compact hood with attachment for camera
4. Door to manually position and access the gel
5. A digital colour camera with filters and CMOS sensor for capturing high resolution images in low light conditions
6. A switch to select between High-Low UVA light
7. Software for controlling camera via computer
8. Instruction manual

Ordering description

EcoDoc 1 (E3560500): ready-to-use gel documentation system.

Trans-illumination with UVA light source and hi-lo light intensity control, 10 x 10 cm illumination area. Hood fitted with computer controllable 18 MP DSLR camera and filters, and software adapted for EcoDoc.

SUGGESTION

Order along with the system a chroma-filter for viewing the gel without the camera.

EcoDoc and its spares and accessories

Item Description	Cat. No.	Unit
EcoDoc, ready-to-use gel documentation system. Trans-illumination with UVA light source and hi-lo light intensity control, 10 x 10 cm illumination area, with 18 MP DSLR computer controllable camera with acquisition software and analysis software.	E3560500	System

ECODOC 2

Gel documentation system

- ✓ UV-transparent diffuser window, 18 x 15 cm
- ✓ Switch for dual intensity of UV-light
- ✓ Compact viewing hood
- ✓ Door to manually access gel for band excision
- ✓ Trans-illumination for taking images in the UV range
- ✓ 366 nm UVA tubes (6 W, 6 tubes)



EcoDoc 2
(representational image)

Features of this apparatus

Rugged

- Non-brittle filter made of plastic which does not crack easily
- No solarization i.e., UV-transparency of UV-transparent diffuser window is unchanged over time

High Sensitivity

- Visual detection limit 1 ng per compact band of EtBr stained dsDNA due to intensity of UVA tubes
- UV-transparent diffuser allows 85-90% of the UV to pass through
- Dual (Hi-Lo) mode for viewing. Go to Hi-mode only when required

Safety

- No skin burns or damage to normal retina's as UVA tubes emit light similar to light found outdoors
- Negligible phot-nicking or photo-bleaching of DNA due to use of lower energy UVA tubes

Economical

- Low capital cost and spares
- Does not need costly UV-transparent violet filter

Ready-to-use system includes

1. Lower housing unit with a UV-transparent window
2. Six UVA-tubes of 6 W each
3. A compact hood with attachment for camera
4. Door to manually position and access the gel
5. A digital colour camera with filters and CMOS sensor for capturing high resolution images in low light conditions
6. A switch to select between High-Low UVA light
7. Software for controlling camera via computer
8. Instruction manual

Ordering description

EcoDoc 1 (E3561000): ready-to-use gel documentation system.

Trans-illumination with UVA light source and hi-lo light intensity control, 18 x 15 cm illumination area. Hood fitted with computer controllable 18 MP DSLR camera and filters, and software adapted for EcoDoc.

SUGGESTION

Order along with the system a chroma-filter for viewing the gel without the camera.

EcoDoc and its spares and accessories

Item Description	Cat. No.	Unit
EcoDoc, ready-to-use gel documentation system. Trans-illumination with UVA light source and hi-lo light intensity control, 18 x 15 cm illumination area, with 18 MP DSLR computer controllable camera with acquisition software and analysis software	E3561000	System

**ECONOMIC RANGE
pH METERS
SALIENT FEATURES**



Rugged

- Aluminum body of meter ensures no rusting
- Epoxy electrodes are unbreakable and safe guard from student damage
- Epoxy electrodes are unbreakable and safe guard from student damage

Ease of Use

- Independent calibration knobs for different pH
- Calibration knobs provided in the front for convenient access
- Big and bright LED for ease of viewing

Economical

- Compact design
- Conveniently priced to fit budgets of all labs
- Spares and accessories are easily available

**ECONOMIC RANGE
 PH METERS
 SELECTION GUIDE**

Model	pH display	Dimension			Calibration Points	Accuracy	Resolution	Weight	Temperature compensation
		width (cm)	depth (cm)	height (mm)					
SWAN E4500001	4 dig	w	d	h	3 Independent Knobs	+/- 0.1	0.01	weight	NO
HANS In development	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYGNUS In development	NA	NA	NA	NA	NA	NA	NA	NA	NA

pH meters are compatible with all commercially available combined Ag/AgCl₂ electrodes with a standard B-N-C connector

SWAN

- ✓ Table-Top, Lab model
- ✓ Combined type pH electrode
- ✓ LED on mains switch
- ✓ Individual knobs on front panel



SWAN

Features of this apparatus

Economical

- Compact design
- Conveniently priced to fit budgets of all labs
- Spares and accessories are easily available

Rugged

- Aluminum body of meter ensures no rusting
- Epoxy electrodes are unbreakable and safe guard from student damage
- pH meter is designed for robust usage with minimal damage

Ease of Use

- Independent calibration knobs for different pH
- Calibration knobs provided in the front for convenient access
- Big and bright LED for ease of viewing

Complete Specifications

Application :	Table-Top, Lab model
Electrode :	Combined type pH electrode
pH display :	4 digit, red colour, 7 segment LED
Display range :	00.00 to 14.00 pH
Display resolution :	00.01 pH
Indication Accuracy :	+/- 0.1 pH
Calibration points :	4.0, 7.0 & 9.2 pH
Calibration provision :	Individual knobs on front panel
Mains :	230 V AC +/- 10%, 50 Hz
Fuse :	1 A, provided on back panel
Power On Switch :	Provided on front panel
Mains Indication :	LED on mains switch
Dimensions:	11 cm (w) x 23.4 cm (d) x 14.5 cm (h)
Weight :	1133 g

SWAN and its accessories

Item Description	Cat. No.	Unit
Swan, pH meter, with combined Ag/AgCl ₂ electrode, electrode stand, 4 digit LED display. Accuracy of +/- 0.1 pH, resolution of 0.001 pH, 3 point calibration.	E4500001	System
pH electrode, glass body combined type, Ag/AgCl ₂ , 80 cm cable length	E4501001	Unit
pH electrode, epoxy body (unbreakable) combined type, Ag/AgCl ₂ , 80 cm cable length	E4501002	Unit

**ECONOMIC RANGE
MICROPIPETTES & MINIPIPETTES
SALIENT FEATURES**



Leak-proof

- Tips fits perfectly on the micropipette, eliminating leakage
- Good sealants to ensure volume accuracy
- Durable O-rings for long life

Error Minimization

- Accurate measurements due to good design
- Easy to read display
- Stops provided to avoid change of set volume

Rugged

- Good plastics used to extend pipette life
- Durable sealing Components used
- Design allows minimal corrosion of parts

Economical

- Low Cost Design
- Easy to Calibrate
- Economical replaceable parts

ECONOMIC RANGE
MICROPIPETTES & MINIPIPETTES
SELECTION GUIDE

Micropipettes Variable volume. Can be calibrated. Approx. length - 24 cm						
Model	Catalog No.	Volume (in μL)		Increment	Display Digit	Tip
		Min.	Max.			
ECOSEP BASIC	E5100010	0.5	10	0.1 μL	0.0	0.5-10 μL tip
ECOSEP BASIC	E5100050	5	50	1 μL	00	2-200 μL tip
ECOSEP BASIC	E5100100	10	100	1 μL	000	2-200 μL tip
ECOSEP BASIC	E5100200	20	200	1 μL	000	2-200 μL tip
ECOSEP BASIC	E5101000	100	1000	10 μL	0000	100-1000 μL tip
Minipipettes Fixed volume. Cannot be calibrated. Approx. length - 13 cm						
Model	Catalog No.	Volume (in μL)	Increment	Display Digit	Tip	
ECOSEP STUDENT	E5500005	5	-	-	2-200 μL tip	
ECOSEP STUDENT	E5500010	10	-	-	2-200 μL tip	
ECOSEP STUDENT	E5500020	20	-	-	2-200 μL tip	
ECOSEP STUDENT	E5500050	50	-	-	2-200 μL tip	
ECOSEP STUDENT	E5500090	90	-	-	2-200 μL tip	
ECOSEP STUDENT	E5500100	100	-	-	2-200 μL tip	
ECOSEP STUDENT	E5500200	200	-	-	100-1000 μL tip	
ECOSEP STUDENT	E5500250	250	-	-	100-1000 μL tip	
ECOSEP STUDENT	E5500900	900	-	-	100-1000 μL tip	
ECOSEP STUDENT	E5501000	1000	-	-	100-1000 μL tip	
Minipipettes can be customized to any fixed volume on special request.						

VARIABLE MICROPIPETTES

- ✓ Can be calibrated easily
- ✓ Approximate length is 24 cm
- ✓ Easy to read display



Micropipette

Features of this Micropipette

Economical

- Easy to calibrate
- Economical replacement parts
- Low maintenance

Rugged

- Use of good plastics to extend pipette life
- Durable sealing components used
- Design allows minimal corrosion of parts

Leak-Proof

- No leakage as tips fit perfectly
- Good sealants to ensure volume accuracy
- Durable O-rings for long life

Error Minimization

- Easy to read display
- Stops provided to avoid change of set volume
- Autoclavable to ensure no contamination

Catalog No.	Volume (in μL)		Increment	Display Digit	Tip
	Min.	Max.			
E5100010	0.5	10	0.1 μL	0.0	0.5-10 μL tip
E5100050	5	50	1 μL	00	2-200 μL tip
E5100100	10	100	1 μL	000	2-200 μL tip
E5100200	20	200	1 μL	000	2-200 μL tip
E5101000	100	1000	10 μL	0000	100-1000 μL tip

Micropipette and its spares and accessories

Item Description	Cat. No.	Unit
Micropipette, 0.5-10 μL , variable volume, fully autoclavable, 0.1 μL increment, 0.0 digit display, fits 0.5-10 μL tips.	E5100010	Unit
Micropipette, 5-50 μL , variable volume, fully autoclavable, 1 μL increment, 00 digit display, fits 2-200 μL tips.	E5100050	Unit
Micropipette, 10-100 μL , variable volume, fully autoclavable, 1 μL increment, 000 digit display, fits 2-200 μL tips.	E5100100	Unit
Micropipette, 20-200 μL , variable volume, fully autoclavable, 1 μL increment, 000 digit display, fits 2-200 μL tips.	E5100200	Unit
Micropipette, 100-1000 μL , variable volume, fully autoclavable, 10 μL increment, 0000 digit display, fits 100-1000 μL tips.	E5101000	Unit
Micropipette wall stand for single micropipette.	E6410001	Unit
Micropipette stand, for four micropipettes.	E6410004	Unit

FIXED MINIPIPETTES

- ✓ **Low cost Design**
- ✓ **Durable sealing**
- ✓ **Accurate measurements**



ECOSEP STUDENT

Features of this Micropipette

Economical

- Low cost design due to small size and low cost O-rings
- No calibration required

Rugged

- Use of good plastics to extend pipette life
- Durable sealing components used
- Design allows minimal corrosion of parts

Leak-Proof

- No leakage as tips fit perfectly
- Good sealants to ensure volume accuracy
- Durable O-rings for long life

Error Minimization

- Accurate measurements due to good design

Minipipette and its spares and accessories

Item Description	Cat. No.	Unit
Minipipette, 5 µL, fixed volume, for tips upto 200 µL.	E5500005	Unit
Minipipette, 10 µL, fixed volume, for tips upto 200 µL.	E5500010	Unit
Minipipette, 20 µL, fixed volume, for tips upto 200 µL.	E5500020	Unit
Minipipette, 50 µL, fixed volume, for tips upto 200 µL.	E5500050	Unit
Minipipette, 90 µL, fixed volume, for tips upto 200 µL.	E5500090	Unit
Minipipette, 100 µL, fixed volume, for tips upto 200 µL.	E5500100	Unit
Minipipette, 200 µL, fixed volume, for tips upto 200 µL.	E5500200	Unit
Minipipette, 250 µL, fixed volume, for tips upto 200 µL.	E5500250	Unit
Minipipette, 500 µL, fixed volume, for tips upto 200 µL.	E5500500	Unit
Minipipette, 900 µL, fixed volume, for tips upto 200 µL.	E5500900	Unit
Minipipette, 1000 µL, fixed volume, for tips upto 200 µL, with wall mountable stand.	E5501000	Unit
Minipipette wall stand for 1 minipipette	E5500001	Unit
Minipipette stand for 8 minipipettes.	E5500004	Unit

STAND FOR MICROPIPETTES

Cat. No. E5101105

- ... *Accommodates 4 micropipettes at a time*
- ... *Pipettes maintained at a convenient slant*
- ... *Holds box of 200 μ L micropipette tips at the rear*

**MICRO-TEST TUBES STAND**

Cat. No. E5202106

- ... *For 1.5 and 2 mL microcentrifuge tubes*
- ... *Holds 10 tubes at a time*

**TIP & TUBE DISCARD CONTAINER**

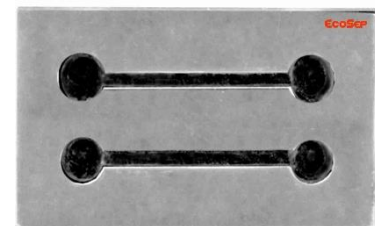
Cat. No. E5303810

- ... *Rectangular box of thick clear acrylic*
- ... *Non-spill lid with 3 cm dia discard hole and flip-flop cover*

**MICROBIAL CHEMOTAXI CHAMBER**

Cat. No. E5402078

- ... *Two tracks per chamber*
- ... *Each track has two wells (50 μ L) joined by 25 mm long channel for capillary tube*
- ... *Size: 5 x 3 cm*
- ... *Autoclavable*

**GEL SANDWICH OPENER**

Cat. No. E6130257

- ... *For separating the notch plate and rectangular plate*

AGAROSE DISPENSER

Cat. No. E6236182

... *For convenient sealing of vertical gel apparatus
with agarose*

GEL SLICER

Cat. No. E6305150

... *Size: 6.5 (w) x 15 (l) cm
Breakage resistant*

**ELECTRICAL CORDS with 2 mm female
and 4 mm male connectors**

Cat. No. E6640122

... *With male and female connectors
Designed for user safety*

**ELECTRICAL CORDS with 4 mm female
and male 4 mm connectors**

Cat. No. E6640124

... *With male and female connectors
Designed for user safety*

GRADIENT MIXER

Cat. No. E6720167

... *Triple-barrel
Volume per chamber 14 mL
Leak-proof plunging stopper
Accommodates a magnetic spin-bar of length \leq
10 mm*

LEVELLING TABLE

Cat. No. E6941219

... *21 x 21 cm
Novel penta-legged design for compactness
With spirit-level*

ECOSEP

Economic Separations

Product Catalog

Horizontal Electrophoresis Apparatus

Vertical Electrophoresis Apparatus

Electroblotting Apparatus

Gel-Documentation

Power Supplies

Micropipettes

Minipipettes

pH Meters

Contact us at

sales@techresource.in

Website

www.ecosep.in

Reg. Office Address:

TechResource,

188 Nagdevi Street,

2nd Floor,

Mumbai 400 003.