







EcoSep

Economic Separations

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Horizontal Electrophoresis Apparatus
Vertical Electrophoresis Apparatus
Electroblotting Apparatus
Gel-Documentation
Power Supplies
Micropipettes
Minipipettes
pH Meters

Product Catalog

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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

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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 EVSPR-US0408	1	4	8.5	1.5	4	No	50	Beacon Electravolt LightSaber Spark
SLIMPAGE EVSPR-UC0408	1	4	8.5	1.5	4	Yes	50	
ECOPAGE EVEPR-US0708	1	7	8.5	1.5	8	No	100	
ECOPAGE EVEPR-UC0708	1	7	8.5	1.5	8	Yes	100	
MIDIPAGE EVMPR-US1010	1	10	10	1.5	12	No	250	Beacon Spark
TUBBYPAGE EVTPR-US1416	1	14	16	1.5	13	No	700	

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

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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 ort 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

		EVSPR-US0408	EVSPR-UC0408
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, 4 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

Slimpage (EVSPR-US0408): *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 (EVSPR-UC0408): *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 (EVSPS-CS0SG1), Glass plate stand (EVSPS-GPS003)

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Slimpage and its spares and accessories

Item Description	Cat. No.	Unit
Slimpage, ready-to-use system.	EVSPR-US0408	System
Slimpage, ready-to-use system, with agarose-free casting stand	EVSPR-UC0408	System
Clamps with screws (one pair)	EVC0S-CL0085	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0202	Set
Silicone gasket for cathodic electrode unit	EVSPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 4 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	EVSPS-CMM042	Piece
Comb 1.5 mm thick, PMMA, 6 wells, 10 mm deep, est. vol. 65 µL/well (one pair)	EVSPS-CMM062	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0082	Set
Notched and rectangular glass plate, 4 (w) x 8.5 (l) cm (one of each)	EVSPS-GNR008	Set
Notched and rectangular glass plate with bonded 1.5 mm spacers, 4 (w) x 8.5 (l) cm (one of each)	EVSPS-G0R008	Set
Gel-casting stand with ‘C’ shaped rubber gasket for agarose free sealing	EVSPS-CS0SG1	System
C shaped rubber gasket for agarose free sealing	EVSPS-CSGSG1	Piece
Glass plate stand	EVSPS-GPS003	Piece

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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 ort 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

		EVEPR-US0708	EVEPR-UC0708
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

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Ordering description

Ecopage (EVEPR-US0708): *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 (EVEPR-UC0708): *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 (EVEPS-CS0SG1)
Glass plate stand (EVEPS-GPS003)

Ecopage and its spares and accessories

Item Description	Cat. No.	Unit
Ecopage, ready-to-use system.	EVEPR-US0708	System
Ecopage, ready-to-use system, with agarose-free casting stand	EVEPR-UC0708	System
Clamps with screws (one pair)	EVC0S-CL0085	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0202	Set
Silicone gasket for cathodic electrode unit	EVEPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 8 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	EVEPS-CMM082	Piece
Comb 1.5 mm thick, PMMA, 10 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	EVEPS-CMM102	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0082	Set
Notched and rectangular glass plate, 7 (w) x 8.5 (l) cm (one of each)	EVEPS-GNR008	Set
Notched and rectangular glass plate, with bonded spacers, 7 (w) x 8.5 (l) cm (one of each)	EVEPS-G0R008	Set
Gel-casting stand with 'C' shaped rubber gasket for agarose free sealing	EVEPS-CS0SG1	System
C shaped rubber gasket for agarose free sealing	EVEPS-CSGSG1	Piece
Glass plate stand	EVEPS-GPS003	Piece

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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**



Midipage

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

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 ort 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

		EVMPR-US1010
1.	Lower anodic tank fitted with male connector and electrodes	Y
2.	Cathodic electrode unit fitted with male connector & electrode	Y
3.	Resilient silicone gasket for cathodic electrode unit	Y
4.	Two notched and two rectangular glass plates	Y
5.	Four 1.5 mm thick, breakage resistant, rounded spacers	Y
6.	Two PMMA comb (1.5 mm thick, 12 wells, est. vol. 75 µL/well)	Y
7.	Set of clamps with screws	Y
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	Y
11.	Instruction manual	Y

Ordering description

Midipage (EVMPR-US1010): *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 (EVMPS-CS0BC1)
Glass plate stand (EVMPS-GPS003)

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Midipage and its spares and accessories

Item Description	Cat. No.	Unit
Midipage, ready-to-use system.	EVMPR-US1010	System
Clamps with screws (one pair)	EVC0S-CL0100	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0102	Set
Silicone gasket for cathodic electrode unit	EVMPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 10 wells, 12 mm deep, est. vol. 75 uL/ well	EVMPS-CMM102	Piece
Comb 1.5 mm thick, PMMA, 12 wells, 12 mm deep, est. vol. 65 uL/ well	EVMPS-CMM122	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0102	Set
Notched and rectangular glass plate, 14 (w) x 11 (l) cm (one of each)	EVMPS-GNR014	Set
Notched and rectangular glass plate, with bonded spacers, 14 (w) x 11 (l) cm (one of each)	EVMPS-G0R014	Set
Gel-casting stand with binder clips	EVMPS-CS0BC1	Piece
Glass plate stand	EVMPS-GPS003	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

		EVTPR-US1416
1.	Lower anodic tank fitted with male connector and electrodes	Y
2.	Cathodic electrode unit fitted with male connector & electrode	Y
3.	Resilient silicone gasket for cathodic electrode unit	Y
4.	Two notched and two rectangular glass plates	Y
5.	Four 1.5 mm thick, breakage resistant, rounded spacers	Y
6.	Two PMMA comb (1.5 mm thick, 20 wells, est. vol. 75 µL/well)	Y
7.	Set of clamps with screws	Y
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	Y
11.	Instruction manual	Y

Ordering description

Tubbypage (EVTPR-US1416): *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 (EVTPS-CS0BC1)
Glass plate stand (EVTPS-GPS002)

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Tubbypage and its spares and accessories

Item Description	Cat. No.	Unit
Tubbypage, ready-to-use system.	EVTPR-US1416	System
Clamps with screws (one pair)	EVC0S-CL0140	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0202	Set
Silicone gasket for cathodic electrode unit	EVTPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 13 wells, 10 mm deep, est. vol. 140 uL/ well	EVTPS-CMM132	Piece
Comb 1.5 mm thick, PMMA, 20 wells, 10 mm deep, est. vol. 140 uL/ well	EVTPS-CMM202	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0142	Set
Notched and rectangular glass plate, 20 (w) x 16.5 (l) cm (one of each)	EVTPS-GNR014	Set
Gel-casting stand with binder clips	EVTPS-CS0BC1	Piece
Glass plate stand	EVTPS-GPS002	Piece

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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

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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 EBNAR-SC0605	For protein blotting	6 x 5	2	4 mm	Yes	250 mL	Beacon Spark
TUBBYBLOT EBTBR-SC1614	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 ort 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

		EBNAR-SC0605
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 ponge 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 femaile & male connectors designed for user safety (one pair)	Y
7.	Instruction manual	Y

Ordering description

Nanoblot (EBNAR-SC0605): *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.	EBNAR-SC0605	System
Cathode and anode plates with male connectors (2mm), uni-directional insertion and migration feature	EBNAS-CAPLT4	Set
Gel membrane-holding cassette for transfer of anions with guide-pins, stoppers and locking-nuts	EBNAS-GCAN01	Set
Sponge pads (Four)	EBNAS-SP0605	Packet
Guide pins with stoppers and locking nuts (two of each)	EBNAS-SCNT02	packet

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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 ort 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

		EBTBR-SC1614
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 ponge 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 femaile (2 mm) & male connectors designed for user safety (one pair)	Y
7.	Instructipon manual	Y

Ordering description

Tubbyblot (EBTBR-SC1614): *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.*

Tubbyblot and its spares and accessories

Item Description	Cat. No.	Unit
Tubbyblot, ready-to-use system.	EBTBR-SC1614	System
Cathode and anode plates with male connectors (4 mm), uni-directional insertion and migration feature	EBTBS-CAPLT4	Set
Gel membrane-holding cassette for transfer of anions with guide-pins, stoppers and locking-nuts	EBTBS-GCAN01	Set
Sponge pads (Eight)	EBTBS-SP1614	Packet
Guide pins with stoppers and locking nuts (four of each)	EBTBS-SCNT04	packet

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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

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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 EHSSR-000310	3 x 10	4	8	No	UV Opaque	100	Beacon Electravolt LightSaber Spark
SLIMSUB EHSSR-UC0310	3 x 10	4	8	Yes	UVT		
ECOSUB EHESR-000710	7 x 10	8	16	No	UV Opaque	200	Beacon Electravolt LightSaber Spark
ECOSUB EHESR-UC0710	7 x 10	8	16	Yes	UVT		
MIDISUB EHMSR-001010	10 x 10	15	30	No	UV Opaque	350	Beacon Spark
MIDISUB EHMSR-UC1010	10 x 10	15	30	Yes	UVT		
TUBBYSUB EHTSR-001510	15 x 10	15 / 20	30 / 40	No	UV Opaque	500	Beacon Spark
TUBBYSUB EHTSR-UC1510	15 x 10	15 / 20	30 / 40	Yes	UVT		
HUNKYSUB EHHSR-002020	20 x 20	30	120	No	UV Opaque	1500	Beacon Spark
HUNKYSUB EHHSR-UC2020	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)

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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 ort 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

		EHSSR-000310	EHSSR-UC0310
1.	Moulded tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque for gel size 3 (w) x 10 (l) cm with slots for positioning two combs	Y	-
3.	UV-transparent for gel size 3 (w) x 10 (l) cm with slots for positioning two combs	-	Y
4.	Two PMMA combs (4 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

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Ordering description

Slimsub (EHSSR-US0310): *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 (EHSSR-UC0310)*: 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 (EHSSS-TU0305, EHSSS-TU0310), Extra combs (EHSSS-CM0042, EHSSS-CM0062), Gel slicer (EHSSS-GS0310)

Slimsub and its spares and accessories

Item Description	Cat. No.	Unit
Slimsub, ready-to-use system, with UV-opaque tray	EHSSR-US0310	System
Slimsub, ready-to-use system, with UV-transparent tray	EHSSR-UC0310	System
Cathode (black) and anode (red) electrode plates	EHSSS-CAPLT4	Set
UV-opaque tray [gel size: 3 (w) x 5 (l) cm]	EHSSS-T00305	Piece
UV-transparent tray [gel size: 3 (w) x 5 (l) cm]	EHSSS-T00310	Piece
UV-opaque tray [gel size: 3 (w) x 10 (l) cm]	EHSSS-TU0305	Piece
UV-transparent tray [gel size: 3 (w) x 10 (l) cm]	EHSSS-TU0310	Piece
Comb 1.5 mm, PMMA, 4 wells/ 28 mm	EHSSS-CM0042	Piece
Comb 1.5 mm, PMMA, 6 wells/ 28 mm	EHSSS-CM0062	Piece
Gel casting stand for tray max width 3 cm (w) and length 10 cm	EHSSS-CC0310	Piece
Gel slicer, breakage resistant, 2.5 (w) x 10 (l) cm	EHSSS-GS0310	Piece

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ECOSUB

With UV opaque tray

ECOSUB

With UV transparent tray

- ✓ ***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*



Ecosub

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 ort 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

		EHESR-000710	EHESR-UC0710
1.	Moulded tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque tray for gel size 7 (w) x 10 (l) cm with slots for positioning two combs	Y	-
3.	UV-transparent tray for gel size 7 (w) x 10 (l) cm with slots for positioning two combs	-	Y
4.	Two PMMA combs (8 wells, 1.5 mm thick)	Y	Y
5.	Lid	Y	Y
6.	Gel casting stand for tray of width 7 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

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Ordering description

Ecosub (EHESR-US0710): *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 (EHESR-UC0710)*: 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 (EHESS-T00710, EHESS-TU0710), Extra combs (EHESS-CM0082, EHESS-CM0102), Gel slicer (EHESS-GS0710)

Ecosub and its spares and accessories

Item Description	Cat. No.	Unit
Ecosub, ready-to-use system, with UV-opaque tray	EHESR-000710	System
Ecosub, ready-to-use system, with UV-transparent tray	EHESR-UC0710	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHESS-CAPLT4	Set
UV-opaque tray [gel size: 7 (w) x 5 (l) cm]	EHESS-T00705	Piece
UV-transparent tray [gel size: 7 (w) x 5 (l) cm]	EHESS-TU0705	Piece
UV-opaque tray [gel size: 7 (w) x 10 (l) cm]	EHESS-T00710	Piece
UV-transparent tray [gel size: 7 (w) x 10 (l) cm]	EHESS-TU0710	Piece
Comb 1.5 mm, PMMA, 8 wells/ 68 mm	EHESS-CM0082	Piece
Comb 1.5 mm, PMMA, 10 wells/ 68 mm	EHESS-CM0102	Piece
Gel casting stand for tray max width 7 cm (w) and length 10 cm	EHESS-CC0710	Piece
Gel casting dams (silicone) for tray with gel width 7 cm	EHESS-CGS007	Piece
Gel slicer, breakage resistant, 6.5 (w) x 10 (l) cm	EHESS-GS0710	Piece

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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 ort 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

		EHMSR-001010	EHMSR-UC1010
1.	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 (EHMSR-001010): *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 (EHMSR-UC1010)*: 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 (EHMSS-T01010, EHMSS-TU10102),
Extra combs (EHMSS-CM0122),
Gel slicer (EHMSS-CM0152)

Midisub and its spares and accessories

Item Description	Cat. No.	Unit
Midisub, ready-to-use system, with UV-opaque tray	EHMSR-001010	System
Midisub, ready-to-use system, with UV-transparent tray	EHMSR-UC1010	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHMSS-CAPLT4	Set
UV-opaque tray [gel size: 10 (w) x 5 (l) cm]	EHMSS-T01005	Piece
UV-transparent tray [gel size: 10 (w) x 5 (l) cm]	EHMSS-TU1005	Piece
UV-opaque tray [gel size: 10 (w) x 10 (l) cm]	EHMSS-T01010	Piece
UV-transparent tray [gel size: 10 (w) x 10 (l) cm]	EHMSS-TU1010	Piece
Comb 1.5 mm, PMMA, 12 wells	EHMSS-CM0122	Piece
Comb 1.5 mm, PMMA, 15 wells	EHMSS-CM0152	Piece
Gel casting stand for tray max width 10 cm (w) and length 10 cm	EHMSS-CC1010	Piece
Gel slicer, breakage resistant, 9.5 (w) x 10 (l) cm	EHMSS-GS1010	Piece

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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 ort 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

		EHTSR-001510	EHTSR-UC1510
1.	Tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque for gel size 15 (w) x 10 (l) cm with slots for positioning two combs	Y	
3.	UV-transparent for gel size 15 (w) x 10 (l) cm with slots for positioning two combs		Y
4.	Two PMMA combs (20 wells, 1.5 mm thick)	Y	Y
5.	Lid	Y	Y
6.	Gel casting stand for tray of width 7 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

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Ordering description

Tubbysub (EHTSR-001510): *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 (EHTSR-UC1510)*: 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 (EHTSS-T01505, EHTSS-T01510, EHTSS-TU1505, EHTSS-TU1510, Extra combs (EHTSS-CM0152, EHTSS-CM0202), Gel slicer (EHTSS-GS1510)

Tubbysub and its spares and accessories

Item Description	Cat. No.	Unit
Tubbysub, ready-to-use system, with UV-opaque tray	EHTSR-001510	System
Tubbysub, ready-to-use system, with UV-transparent tray, with tape-free casting stand	EHTSR-UC1510	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHTSS-CAPLT4	Set
UV-opaque tray [gel size: 15 (w) x 5 (l) cm]	EHTSS-T01505	Piece
UV-transparent tray [gel size: 15 (w) x 5 (l) cm]	EHTSS-TU1505	Piece
UV-opaque tray [gel size: 15 (w) x 10 (l) cm]	EHTSS-T01510	Piece
UV-transparent tray [gel size: 15 (w) x 10 (l) cm]	EHTSS-TU1510	Piece
Comb, 1.5 mm, PMMA, 15 wells	EHTSS-CM0152	Piece
Comb, 1.5 mm, PMMA, 20 wells	EHTSS-CM0202	Piece
Gel casting stand for tray max width 15 cm (w) and length 10 cm	EHTSS-CC1510	Piece
Gel slicer, breakage resistant, 14.5 (w) x 10 (l) cm	EHTSS-GS1510	Piece

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HUNKYSUB

With UV opaque tray

HUNKYSUB

With UV transparent tray

- ✓ ***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*



Hunkysub

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

		EHHSR-002020	EHHSR-UC2020
1.	Tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque for gel size 20 (w) x 20 (l) cm with slots for positioning two combs	Y	-
3.	UV-transparent for gel size 20 (w) x 20 (l) cm with slots for positioning two combs	-	Y
4.	Two PMMA combs (30 wells, 1.5 mm thick)	Y	Y
5.	Lid	Y	Y
6.	Gel casting stand for tray of width 20 cm length 20 cm	-	Y
7.	Electrical cords with male & female connectors designed for user safety (one pair)	Y	Y
8.	Instruction manual	Y	Y

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Ordering description

Hunkysub (EHHSR-002020): *Ready-to-use system with* ***UV-opaque tray****, apparatus with male connectors, unidirectional migration, and removable electrodes. Tray for gel size 20 (w) x 20 (l) cm and Comb (1.5 mm, PMMA, 30 wells)*

Hunkysub (EHHSR-UC2020)*: Ready-to-use system with* ***UV-transparent tray****, apparatus with male connectors, unidirectional migration, and removable electrodes. Tray for gel size 20 (w) x 20 (l) cm and Comb (1.5 mm, PMMA, 30 wells), with a tape-free gel casting stand.*

SUGGESTION

Order along with Ready-to-use system

Extra trays (EHHSS-T02005, EHHSS-TU2005, EHHSS-T02010, EHTSS-TU1510), Extra combs (EHHSS-CM0252, EHHSS-CM0402), Gel slicer (THC0S-GS0615)

Hunkysub and its spares and accessories

Item Description	Cat. No.	Unit
Hunkysub, ready-to-use system, with UV-opaque tray	EHHSR-002020	System
Hunkysub, ready-to-use system, with UV-transparent tray, with tape-free casting stand	EHHSR-UC2020	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHHSS-CAPLT4	Set
UV-opaque tray [gel size: 20 (w) x 5 (l) cm]	EHHSS-T02005	Piece
UV-transparent tray [gel size: 20 (w) x 5 (l) cm]	EHHSS-TU2005	Piece
UV-opaque tray [gel size: 20 (w) x 10 (l) cm]	EHHSS-T02010	Piece
UV-transparent tray [gel size: 20 (w) x 10 (l) cm]	EHHSS-TU2010	Piece
UV-opaque tray [gel size: 20 (w) x 15 (l) cm]	EHHSS-T02015	Piece
UV-transparent tray [gel size: 20 (w) x 15 (l) cm]	EHHSS-TU2015	Piece
UV-opaque tray [gel size: 20 (w) x 20 (l) cm]	EHHSS-T02020	Piece
UV-transparent tray [gel size: 20 (w) x 20 (l) cm]	EHHSS-TU2020	Piece
Comb, 1.5 mm, PMMA, 25 wells	EHHSS-CM0252	Piece
Comb, 1.5 mm, PMMA, 30 wells	EHHSS-CM0302	Piece
Comb, 1.5 mm, PMMA, 40 wells	EHHSS-CM0402	Piece
Comb, 1.5 mm, PMMA, 45 wells	EHHSS-CM0452	Piece
Gel casting stand for tray max width 20 cm (w) and length 20 cm	EHHSS-CC2020	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

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ECONOMIC RANGE
POWER SUPPLIES
SELECTION GUIDE

Model	Type	Voltage Range	Current Range	No. of outputs	Application	Best with ES models
Beacon EPBCR-001415	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 EPE2R-002015	Four fixed voltages	80, 110, 140, 200 V	upto 150 mA	1	Small verticals & horizontals	Slimpage, Ecopage, Slimsub
Electravolt 3.0 EPE3R-002015	Four fixed voltages	50, 100, 150, 200 V	upto 150 mA	1	Small verticals & horizontals	Slimpage, Ecopage, Slimsub
LightSaber EPLSR-002015	Variable voltage	50-200 V	0-150 mA	2	Small verticals & horizontals	Slimpage, Ecopage, Slimsub, Ecosub,
Spark EPSPR-002530	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.

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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 (EPBCR-001415): *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 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, internal 4 mm female on front panel 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 - 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 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

Electravolt 2.0

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

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 (EPE2R-002015): *Power supply, Range 80 V, 110 V, 140 V, 200 V, single output*

Electravolt 3.0 (EPE3R-002015)*: 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	0Â°C to +40Â°C	0Â°C to +40Â°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 (EPLSR-002015): *Power supply, Range 50-200 V, upto 150 mA, dual output, LED display for voltage and current, with CV, CC and auto-crossover.*

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	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 (EPSPR-002530): *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)

EcoSep
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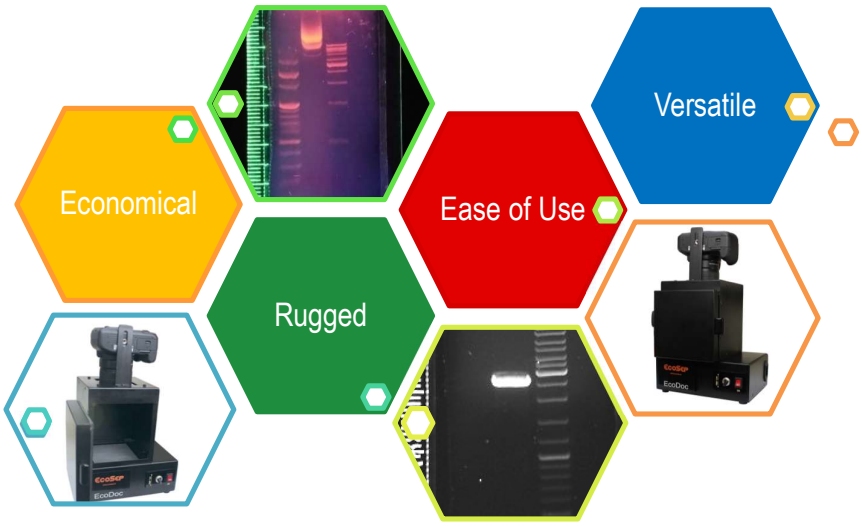
ECONOMIC RANGE
GEL DOCUMENTATION SYSTEMS
SALIENT FEATURES



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 qualty 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

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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 EED1R-PP1010	10	10	4	4 W each	Computer controllable	18 MP	Optional
ECODOC 1 EED2R-PP1518	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.

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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 (EED1R-PP1010)**: 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.	EED1R-PP1010	System

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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 (EED2R-PP1518)**: 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	EED2R-PP1518	System

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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

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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	EMIPR-000010	0.5	10	0.1 µL	0.0	0.5-10 µL tip
ECOSEP BASIC	EMIPR-000050	5	50	1 µL	00	2-200 µL tip
ECOSEP BASIC	EMIPR-000100	10	100	1 µL	000	2-200 µL tip
ECOSEP BASIC	EMIPR-000200	20	200	1 µL	000	2-200 µL tip
ECOSEP BASIC	EMIPR-001000	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	EMINR-000005	5	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000010	10	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000020	20	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000025	25	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000050	50	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000090	90	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000100	100	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000200	200	-	-	100-1000 µL tip
ECOSEP STUDENT	EMINR-000250	250	-	-	100-1000 µL tip
ECOSEP STUDENT	EMINR-000500	500	-	-	100-1000 µL tip
ECOSEP STUDENT	EMINR-000900	900	-	-	100-1000 µL tip
ECOSEP STUDENT	E5501000	1000	-	-	100-1000 µL tip
Minipipettes can be customized to any fixed volume on special request.					

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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.			
EMIPR-000010	0.5	10	0.1 µL	0.0	0.5-10 µL tip
EMIPR-000050	5	50	1 µL	00	2-200 µL tip
EMIPR-000100	10	100	1 µL	000	2-200 µL tip
EMIPR-000200	20	200	1 µL	000	2-200 µL tip
EMIPR-001000	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.	EMIPR-000010	Unit
Micropipette, 5-50 µL, variable volume, fully autoclavable, 1 µL increment, 00 digit display, fits 2-200 µL tips.	EMIPR-000050	Unit
Micropipette, 10-100 µL, variable volume, fully autoclavable, 1 µL increment, 000 digit display, fits 2-200 µL tips.	EMIPR-000100	Unit
Micropipette, 20-200 µL, variable volume, fully autoclavable, 1 µL increment, 000 digit display, fits 2-200 µL tips.	EMIPR-000200	Unit
Micropipette, 100-1000 µL, variable volume, fully autoclavable, 10 µL increment, 0000 digit display, fits 100-1000 µL tips.	EMIPR-001000	Unit
Micropipette stand, for four micropipettes.	EMIPS-S00004	Unit

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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.	EMINR-000005	Unit
Minipipette, 10 µL, fixed volume, for tips upto 200 µL.	EMINR-000010	Unit
Minipipette, 20 µL, fixed volume, for tips upto 200 µL.	EMINR-000020	Unit
Minipipette, 25 µL, fixed volume, for tips upto 200 µL.	EMINR-000025	Unit
Minipipette, 50 µL, fixed volume, for tips upto 200 µL.	EMINR-000050	Unit
Minipipette, 90 µL, fixed volume, for tips upto 200 µL.	EMINR-000090	Unit
Minipipette, 100 µL, fixed volume, for tips upto 200 µL.	EMINR-000100	Unit
Minipipette, 200 µL, fixed volume, for tips upto 200 µL.	EMINR-000200	Unit
Minipipette, 250 µL, fixed volume, for tips upto 200 µL.	EMINR-000250	Unit
Minipipette, 500 µL, fixed volume, for tips upto 200 µL.	EMINR-000500	Unit
Minipipette, 900 µL, fixed volume, for tips upto 200 µL.	EMINR-000900	Unit
Minipipette, 1000 µL, fixed volume, for tips upto 200 µL, with wall mountable stand.	EMINR-001000	Unit
Minipipette stand for 8 minipipettes.	EMINS-S00000	Unit

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www.ecosep.in

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

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ECONOMIC RANGE
pH METERS
SELECTION GUIDE

Model	pH display	Dimension			Calibration Points	Accuracy	Resolution	Weight	Temperature compensation
		width (cm)	depth (cm)	height (mm)					
SWAN EPHSR-004000	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 $Ag/AgCl_2$ electrodes with a standard B-N-C connector

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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.	EPHSR-004000	System
pH electrode, glass body combined type, Ag/$AgCl_2$, 80 cm cable length	EPHCS-EGLS80	Unit
pH electrode, epoxy body (unbreakable) combined type, Ag/$AgCl_2$, 80 cm cable length	EPHCS-EEPX80	Unit

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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:
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188 Nagdevi Street,
2nd Floor,
Mumbai 400 003.

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pH Meters

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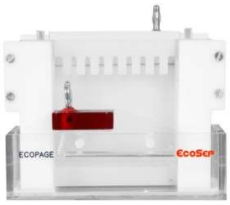







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Horizontal Electrophoresis Apparatus
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Micropipettes
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pH Meters

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

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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 EVSPR-US0408	1	4	8.5	1.5	4	No	50	Beacon Electravolt LightSaber Spark
SLIMPAGE EVSPR-UC0408	1	4	8.5	1.5	4	Yes	50	
ECOPAGE EVEPR-US0708	1	7	8.5	1.5	8	No	100	
ECOPAGE EVEPR-UC0708	1	7	8.5	1.5	8	Yes	100	
MIDIPAGE EVMPR-US1010	1	10	10	1.5	12	No	250	Beacon Spark
TUBBYPAGE EVTPR-US1416	1	14	16	1.5	13	No	700	

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

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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 ort 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

		EVSPR-US0408	EVSPR-UC0408
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, 4 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

Slimpage (EVSPR-US0408): *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 (EVSPR-UC0408): *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 (EVSPS-CS0SG1), Glass plate stand (EVSPS-GPS003)

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Slimpage and its spares and accessories

Item Description	Cat. No.	Unit
Slimpage, ready-to-use system.	EVSPR-US0408	System
Slimpage, ready-to-use system, with agarose-free casting stand	EVSPR-UC0408	System
Clamps with screws (one pair)	EVC0S-CL0085	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0202	Set
Silicone gasket for cathodic electrode unit	EVSPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 4 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	EVSPS-CMM042	Piece
Comb 1.5 mm thick, PMMA, 6 wells, 10 mm deep, est. vol. 65 µL/well (one pair)	EVSPS-CMM062	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0082	Set
Notched and rectangular glass plate, 4 (w) x 8.5 (l) cm (one of each)	EVSPS-GNR008	Set
Notched and rectangular glass plate with bonded 1.5 mm spacers, 4 (w) x 8.5 (l) cm (one of each)	EVSPS-G0R008	Set
Gel-casting stand with ‘C’ shaped rubber gasket for agarose free sealing	EVSPS-CS0SG1	System
C shaped rubber gasket for agarose free sealing	EVSPS-CSGSG1	Piece
Glass plate stand	EVSPS-GPS003	Piece

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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 ort 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

		EVEPR-US0708	EVEPR-UC0708
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

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Ordering description

Ecopage (EVEPR-US0708): *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 (EVEPR-UC0708): *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 (EVEPS-CS0SG1)
Glass plate stand (EVEPS-GPS003)

Ecopage and its spares and accessories

Item Description	Cat. No.	Unit
Ecopage, ready-to-use system.	EVEPR-US0708	System
Ecopage, ready-to-use system, with agarose-free casting stand	EVEPR-UC0708	System
Clamps with screws (one pair)	EVC0S-CL0085	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0202	Set
Silicone gasket for cathodic electrode unit	EVEPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 8 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	EVEPS-CMM082	Piece
Comb 1.5 mm thick, PMMA, 10 wells, 10 mm deep, est. vol. 75 µL/well (one pair)	EVEPS-CMM102	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0082	Set
Notched and rectangular glass plate, 7 (w) x 8.5 (l) cm (one of each)	EVEPS-GNR008	Set
Notched and rectangular glass plate, with bonded spacers, 7 (w) x 8.5 (l) cm (one of each)	EVEPS-G0R008	Set
Gel-casting stand with 'C' shaped rubber gasket for agarose free sealing	EVEPS-CS0SG1	System
C shaped rubber gasket for agarose free sealing	EVEPS-CSGSG1	Piece
Glass plate stand	EVEPS-GPS003	Piece

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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**



Midipage

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

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 ort 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

		EVMPR-US1010
1.	Lower anodic tank fitted with male connector and electrodes	Y
2.	Cathodic electrode unit fitted with male connector & electrode	Y
3.	Resilient silicone gasket for cathodic electrode unit	Y
4.	Two notched and two rectangular glass plates	Y
5.	Four 1.5 mm thick, breakage resistant, rounded spacers	Y
6.	Two PMMA comb (1.5 mm thick, 12 wells, est. vol. 75 µL/well)	Y
7.	Set of clamps with screws	Y
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	Y
11.	Instruction manual	Y

Ordering description

Midipage (EVMPR-US1010): *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 (EVMPS-CS0BC1)
Glass plate stand (EVMPS-GPS003)

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Midipage and its spares and accessories

Item Description	Cat. No.	Unit
Midipage, ready-to-use system.	EVMPR-US1010	System
Clamps with screws (one pair)	EVC0S-CL0100	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0102	Set
Silicone gasket for cathodic electrode unit	EVMPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 10 wells, 12 mm deep, est. vol. 75 uL/ well	EVMPS-CMM102	Piece
Comb 1.5 mm thick, PMMA, 12 wells, 12 mm deep, est. vol. 65 uL/ well	EVMPS-CMM122	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0102	Set
Notched and rectangular glass plate, 14 (w) x 11 (l) cm (one of each)	EVMPS-GNR014	Set
Notched and rectangular glass plate, with bonded spacers, 14 (w) x 11 (l) cm (one of each)	EVMPS-G0R014	Set
Gel-casting stand with binder clips	EVMPS-CS0BC1	Piece
Glass plate stand	EVMPS-GPS003	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

		EVTPR-US1416
1.	Lower anodic tank fitted with male connector and electrodes	Y
2.	Cathodic electrode unit fitted with male connector & electrode	Y
3.	Resilient silicone gasket for cathodic electrode unit	Y
4.	Two notched and two rectangular glass plates	Y
5.	Four 1.5 mm thick, breakage resistant, rounded spacers	Y
6.	Two PMMA comb (1.5 mm thick, 20 wells, est. vol. 75 µL/well)	Y
7.	Set of clamps with screws	Y
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	Y
11.	Instruction manual	Y

Ordering description

Tubbypage (EVTPR-US1416): *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 (EVTPS-CS0BC1)
Glass plate stand (EVTPS-GPS002)

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Tubbypage and its spares and accessories

Item Description	Cat. No.	Unit
Tubbypage, ready-to-use system.	EVTPR-US1416	System
Clamps with screws (one pair)	EVC0S-CL0140	Set
Screws for clamps and cathodic electrode unit	EVC0S-SC0202	Set
Silicone gasket for cathodic electrode unit	EVTPS-SGCEU1	Piece
Comb 1.5 mm thick, PMMA, 13 wells, 10 mm deep, est. vol. 140 uL/ well	EVTPS-CMM132	Piece
Comb 1.5 mm thick, PMMA, 20 wells, 10 mm deep, est. vol. 140 uL/ well	EVTPS-CMM202	Piece
Spacers, 1.5 mm thick, PMMA (one pair)	EVC0S-SP0142	Set
Notched and rectangular glass plate, 20 (w) x 16.5 (l) cm (one of each)	EVTPS-GNR014	Set
Gel-casting stand with binder clips	EVTPS-CS0BC1	Piece
Glass plate stand	EVTPS-GPS002	Piece

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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

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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 EBNAR-SC0605	For protein blotting	6 x 5	2	4 mm	Yes	250 mL	Beacon Spark
TUBBYBLOT EBTBR-SC1614	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 ort 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

		EBNAR-SC0605
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 ponge 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 femaile & male connectors designed for user safety (one pair)	Y
7.	Instruction manual	Y

Ordering description

Nanoblot (EBNAR-SC0605): *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.	EBNAR-SC0605	System
Cathode and anode plates with male connectors (2mm), uni-directional insertion and migration feature	EBNAS-CAPLT4	Set
Gel membrane-holding cassette for transfer of anions with guide-pins, stoppers and locking-nuts	EBNAS-GCAN01	Set
Sponge pads (Four)	EBNAS-SP0605	Packet
Guide pins with stoppers and locking nuts (two of each)	EBNAS-SCNT02	packet

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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 ort 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

		EBTBR-SC1614
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 ponge 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 femaile (2 mm) & male connectors designed for user safety (one pair)	Y
7.	Instructipon manual	Y

Ordering description

Tubbyblot (EBTBR-SC1614): *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.*

Tubbyblot and its spares and accessories

Item Description	Cat. No.	Unit
Tubbyblot, ready-to-use system.	EBTBR-SC1614	System
Cathode and anode plates with male connectors (4 mm), uni-directional insertion and migration feature	EBTBS-CAPLT4	Set
Gel membrane-holding cassette for transfer of anions with guide-pins, stoppers and locking-nuts	EBTBS-GCAN01	Set
Sponge pads (Eight)	EBTBS-SP1614	Packet
Guide pins with stoppers and locking nuts (four of each)	EBTBS-SCNT04	packet

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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

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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 EHSSR-000310	3 x 10	4	8	No	UV Opaque	100	Beacon Electravolt LightSaber Spark
SLIMSUB EHSSR-UC0310	3 x 10	4	8	Yes	UVT		
ECOSUB EHESR-000710	7 x 10	8	16	No	UV Opaque	200	Beacon Electravolt LightSaber Spark
ECOSUB EHESR-UC0710	7 x 10	8	16	Yes	UVT		
MIDISUB EHMSR-001010	10 x 10	15	30	No	UV Opaque	350	Beacon Spark
MIDISUB EHMSR-UC1010	10 x 10	15	30	Yes	UVT		
TUBBYSUB EHTSR-001510	15 x 10	15 / 20	30 / 40	No	UV Opaque	500	Beacon Spark
TUBBYSUB EHTSR-UC1510	15 x 10	15 / 20	30 / 40	Yes	UVT		
HUNKYSUB EHHSR-002020	20 x 20	30	120	No	UV Opaque	1500	Beacon Spark
HUNKYSUB EHHSR-UC2020	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)

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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 ort 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

		EHSSR-000310	EHSSR-UC0310
1.	Moulded tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque for gel size 3 (w) x 10 (l) cm with slots for positioning two combs	Y	-
3.	UV-transparent for gel size 3 (w) x 10 (l) cm with slots for positioning two combs	-	Y
4.	Two PMMA combs (4 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

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Ordering description

Slimsub (EHSSR-US0310): *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 (EHSSR-UC0310)*: 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 (EHSSS-TU0305, EHSSS-TU0310), Extra combs (EHSSS-CM0042, EHSSS-CM0062), Gel slicer (EHSSS-GS0310)

Slimsub and its spares and accessories

Item Description	Cat. No.	Unit
Slimsub, ready-to-use system, with UV-opaque tray	EHSSR-US0310	System
Slimsub, ready-to-use system, with UV-transparent tray	EHSSR-UC0310	System
Cathode (black) and anode (red) electrode plates	EHSSS-CAPLT4	Set
UV-opaque tray [gel size: 3 (w) x 5 (l) cm]	EHSSS-T00305	Piece
UV-transparent tray [gel size: 3 (w) x 5 (l) cm]	EHSSS-T00310	Piece
UV-opaque tray [gel size: 3 (w) x 10 (l) cm]	EHSSS-TU0305	Piece
UV-transparent tray [gel size: 3 (w) x 10 (l) cm]	EHSSS-TU0310	Piece
Comb 1.5 mm, PMMA, 4 wells/ 28 mm	EHSSS-CM0042	Piece
Comb 1.5 mm, PMMA, 6 wells/ 28 mm	EHSSS-CM0062	Piece
Gel casting stand for tray max width 3 cm (w) and length 10 cm	EHSSS-CC0310	Piece
Gel slicer, breakage resistant, 2.5 (w) x 10 (l) cm	EHSSS-GS0310	Piece

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ECOSUB

With UV opaque tray

ECOSUB

With UV transparent tray

- ✓ ***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*



Ecosub

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 ort 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

		EHESR-000710	EHESR-UC0710
1.	Moulded tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque tray for gel size 7 (w) x 10 (l) cm with slots for positioning two combs	Y	-
3.	UV-transparent tray for gel size 7 (w) x 10 (l) cm with slots for positioning two combs	-	Y
4.	Two PMMA combs (8 wells, 1.5 mm thick)	Y	Y
5.	Lid	Y	Y
6.	Gel casting stand for tray of width 7 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

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Ordering description

Ecosub (EHESR-US0710): *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 (EHESR-UC0710)*: 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 (EHESS-T00710, EHESS-TU0710), Extra combs (EHESS-CM0082, EHESS-CM0102), Gel slicer (EHESS-GS0710)

Ecosub and its spares and accessories

Item Description	Cat. No.	Unit
Ecosub, ready-to-use system, with UV-opaque tray	EHESR-000710	System
Ecosub, ready-to-use system, with UV-transparent tray	EHESR-UC0710	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHESS-CAPLT4	Set
UV-opaque tray [gel size: 7 (w) x 5 (l) cm]	EHESS-T00705	Piece
UV-transparent tray [gel size: 7 (w) x 5 (l) cm]	EHESS-TU0705	Piece
UV-opaque tray [gel size: 7 (w) x 10 (l) cm]	EHESS-T00710	Piece
UV-transparent tray [gel size: 7 (w) x 10 (l) cm]	EHESS-TU0710	Piece
Comb 1.5 mm, PMMA, 8 wells/ 68 mm	EHESS-CM0082	Piece
Comb 1.5 mm, PMMA, 10 wells/ 68 mm	EHESS-CM0102	Piece
Gel casting stand for tray max width 7 cm (w) and length 10 cm	EHESS-CC0710	Piece
Gel casting dams (silicone) for tray with gel width 7 cm	EHESS-CGS007	Piece
Gel slicer, breakage resistant, 6.5 (w) x 10 (l) cm	EHESS-GS0710	Piece

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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 ort 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

		EHMSR-001010	EHMSR-UC1010
1.	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 (EHMSR-001010): *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 (EHMSR-UC1010)*: 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 (EHMSS-T01010, EHMSS-TU10102),
Extra combs (EHMSS-CM0122),
Gel slicer (EHMSS-CM0152)

Midisub and its spares and accessories

Item Description	Cat. No.	Unit
Midisub, ready-to-use system, with UV-opaque tray	EHMSR-001010	System
Midisub, ready-to-use system, with UV-transparent tray	EHMSR-UC1010	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHMSS-CAPLT4	Set
UV-opaque tray [gel size: 10 (w) x 5 (l) cm]	EHMSS-T01005	Piece
UV-transparent tray [gel size: 10 (w) x 5 (l) cm]	EHMSS-TU1005	Piece
UV-opaque tray [gel size: 10 (w) x 10 (l) cm]	EHMSS-T01010	Piece
UV-transparent tray [gel size: 10 (w) x 10 (l) cm]	EHMSS-TU1010	Piece
Comb 1.5 mm, PMMA, 12 wells	EHMSS-CM0122	Piece
Comb 1.5 mm, PMMA, 15 wells	EHMSS-CM0152	Piece
Gel casting stand for tray max width 10 cm (w) and length 10 cm	EHMSS-CC1010	Piece
Gel slicer, breakage resistant, 9.5 (w) x 10 (l) cm	EHMSS-GS1010	Piece

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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 ort 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

		EHTSR-001510	EHTSR-UC1510
1.	Tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque for gel size 15 (w) x 10 (l) cm with slots for positioning two combs	Y	
3.	UV-transparent for gel size 15 (w) x 10 (l) cm with slots for positioning two combs		Y
4.	Two PMMA combs (20 wells, 1.5 mm thick)	Y	Y
5.	Lid	Y	Y
6.	Gel casting stand for tray of width 7 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

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Ordering description

Tubbysub (EHTSR-001510): *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 (EHTSR-UC1510)*: 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 (EHTSS-T01505, EHTSS-T01510, EHTSS-TU1505, EHTSS-TU1510, Extra combs (EHTSS-CM0152, EHTSS-CM0202), Gel slicer (EHTSS-GS1510)

Tubbysub and its spares and accessories

Item Description	Cat. No.	Unit
Tubbysub, ready-to-use system, with UV-opaque tray	EHTSR-001510	System
Tubbysub, ready-to-use system, with UV-transparent tray, with tape-free casting stand	EHTSR-UC1510	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHTSS-CAPLT4	Set
UV-opaque tray [gel size: 15 (w) x 5 (l) cm]	EHTSS-T01505	Piece
UV-transparent tray [gel size: 15 (w) x 5 (l) cm]	EHTSS-TU1505	Piece
UV-opaque tray [gel size: 15 (w) x 10 (l) cm]	EHTSS-T01510	Piece
UV-transparent tray [gel size: 15 (w) x 10 (l) cm]	EHTSS-TU1510	Piece
Comb, 1.5 mm, PMMA, 15 wells	EHTSS-CM0152	Piece
Comb, 1.5 mm, PMMA, 20 wells	EHTSS-CM0202	Piece
Gel casting stand for tray max width 15 cm (w) and length 10 cm	EHTSS-CC1510	Piece
Gel slicer, breakage resistant, 14.5 (w) x 10 (l) cm	EHTSS-GS1510	Piece

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HUNKYSUB

With UV opaque tray

HUNKYSUB

With UV transparent tray

- ✓ ***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*



Hunkysub

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

		EHHSR-002020	EHHSR-UC2020
1.	Tank fitted with removable electrodes and male connectors	Y	Y
2.	UV-opaque for gel size 20 (w) x 20 (l) cm with slots for positioning two combs	Y	-
3.	UV-transparent for gel size 20 (w) x 20 (l) cm with slots for positioning two combs	-	Y
4.	Two PMMA combs (30 wells, 1.5 mm thick)	Y	Y
5.	Lid	Y	Y
6.	Gel casting stand for tray of width 20 cm length 20 cm	-	Y
7.	Electrical cords with male & female connectors designed for user safety (one pair)	Y	Y
8.	Instruction manual	Y	Y

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Ordering description

Hunkysub (EHHSR-002020): *Ready-to-use system with* ***UV-opaque tray****, apparatus with male connectors, unidirectional migration, and removable electrodes. Tray for gel size 20 (w) x 20 (l) cm and Comb (1.5 mm, PMMA, 30 wells)*

Hunkysub (EHHSR-UC2020)*: Ready-to-use system with* ***UV-transparent tray****, apparatus with male connectors, unidirectional migration, and removable electrodes. Tray for gel size 20 (w) x 20 (l) cm and Comb (1.5 mm, PMMA, 30 wells), with a tape-free gel casting stand.*

SUGGESTION

Order along with Ready-to-use system

Extra trays (EHHSS-T02005, EHHSS-TU2005, EHHSS-T02010, EHTSS-TU1510), Extra combs (EHHSS-CM0252, EHHSS-CM0402), Gel slicer (THC0S-GS0615)

Hunkysub and its spares and accessories

Item Description	Cat. No.	Unit
Hunkysub, ready-to-use system, with UV-opaque tray	EHHSR-002020	System
Hunkysub, ready-to-use system, with UV-transparent tray, with tape-free casting stand	EHHSR-UC2020	System
Cathode (black) and anode (red) electrode plates with 4 mm male connectors	EHHSS-CAPLT4	Set
UV-opaque tray [gel size: 20 (w) x 5 (l) cm]	EHHSS-T02005	Piece
UV-transparent tray [gel size: 20 (w) x 5 (l) cm]	EHHSS-TU2005	Piece
UV-opaque tray [gel size: 20 (w) x 10 (l) cm]	EHHSS-T02010	Piece
UV-transparent tray [gel size: 20 (w) x 10 (l) cm]	EHHSS-TU2010	Piece
UV-opaque tray [gel size: 20 (w) x 15 (l) cm]	EHHSS-T02015	Piece
UV-transparent tray [gel size: 20 (w) x 15 (l) cm]	EHHSS-TU2015	Piece
UV-opaque tray [gel size: 20 (w) x 20 (l) cm]	EHHSS-T02020	Piece
UV-transparent tray [gel size: 20 (w) x 20 (l) cm]	EHHSS-TU2020	Piece
Comb, 1.5 mm, PMMA, 25 wells	EHHSS-CM0252	Piece
Comb, 1.5 mm, PMMA, 30 wells	EHHSS-CM0302	Piece
Comb, 1.5 mm, PMMA, 40 wells	EHHSS-CM0402	Piece
Comb, 1.5 mm, PMMA, 45 wells	EHHSS-CM0452	Piece
Gel casting stand for tray max width 20 cm (w) and length 20 cm	EHHSS-CC2020	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

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ECONOMIC RANGE
POWER SUPPLIES
SELECTION GUIDE

Model	Type	Voltage Range	Current Range	No. of outputs	Application	Best with ES models
Beacon EPBCR-001415	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 EPE2R-002015	Four fixed voltages	80, 110, 140, 200 V	upto 150 mA	1	Small verticals & horizontals	Slimpage, Ecopage, Slimsub
Electravolt 3.0 EPE3R-002015	Four fixed voltages	50, 100, 150, 200 V	upto 150 mA	1	Small verticals & horizontals	Slimpage, Ecopage, Slimsub
LightSaber EPLSR-002015	Variable voltage	50-200 V	0-150 mA	2	Small verticals & horizontals	Slimpage, Ecopage, Slimsub, Ecosub,
Spark EPSPR-002530	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.

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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 (EPBCR-001415): *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 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, internal 4 mm female on front panel 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 - 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 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

Electravolt 2.0

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

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 (EPE2R-002015): *Power supply, Range 80 V, 110 V, 140 V, 200 V, single output*

Electravolt 3.0 (EPE3R-002015)*: 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	0Â°C to +40Â°C	0Â°C to +40Â°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 (EPLSR-002015): *Power supply, Range 50-200 V, upto 150 mA, dual output, LED display for voltage and current, with CV, CC and auto-crossover.*

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	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 (EPSPR-002530): *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)

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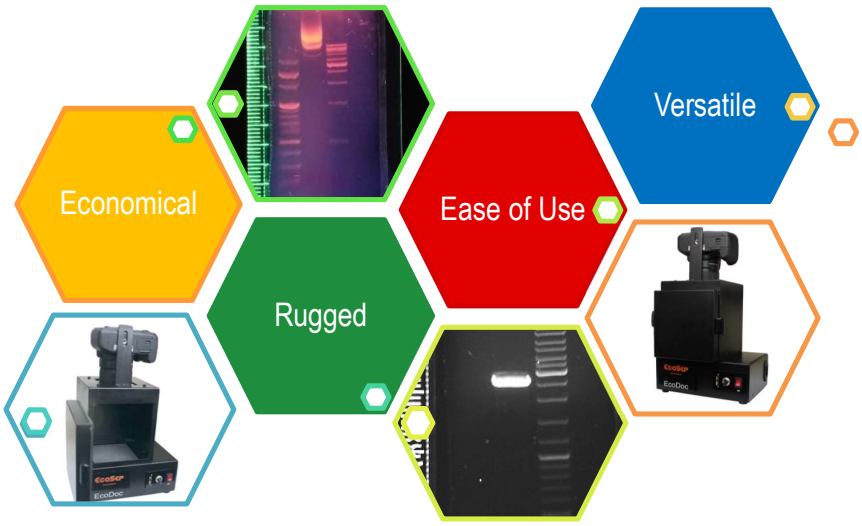
ECONOMIC RANGE
GEL DOCUMENTATION SYSTEMS
SALIENT FEATURES



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 qualty 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

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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 EED1R-PP1010	10	10	4	4 W each	Computer controllable	18 MP	Optional
ECODOC 1 EED2R-PP1518	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.

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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 (EED1R-PP1010)**: 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.	EED1R-PP1010	System

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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 (EED2R-PP1518)**: 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	EED2R-PP1518	System

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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

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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	EMIPR-000010	0.5	10	0.1 µL	0.0	0.5-10 µL tip
ECOSEP BASIC	EMIPR-000050	5	50	1 µL	00	2-200 µL tip
ECOSEP BASIC	EMIPR-000100	10	100	1 µL	000	2-200 µL tip
ECOSEP BASIC	EMIPR-000200	20	200	1 µL	000	2-200 µL tip
ECOSEP BASIC	EMIPR-001000	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	EMINR-000005	5	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000010	10	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000020	20	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000025	25	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000050	50	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000090	90	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000100	100	-	-	2-200 µL tip
ECOSEP STUDENT	EMINR-000200	200	-	-	100-1000 µL tip
ECOSEP STUDENT	EMINR-000250	250	-	-	100-1000 µL tip
ECOSEP STUDENT	EMINR-000500	500	-	-	100-1000 µL tip
ECOSEP STUDENT	EMINR-000900	900	-	-	100-1000 µL tip
ECOSEP STUDENT	E5501000	1000	-	-	100-1000 µL tip
Minipipettes can be customized to any fixed volume on special request.					

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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.			
EMIPR-000010	0.5	10	0.1 µL	0.0	0.5-10 µL tip
EMIPR-000050	5	50	1 µL	00	2-200 µL tip
EMIPR-000100	10	100	1 µL	000	2-200 µL tip
EMIPR-000200	20	200	1 µL	000	2-200 µL tip
EMIPR-001000	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.	EMIPR-000010	Unit
Micropipette, 5-50 µL, variable volume, fully autoclavable, 1 µL increment, 00 digit display, fits 2-200 µL tips.	EMIPR-000050	Unit
Micropipette, 10-100 µL, variable volume, fully autoclavable, 1 µL increment, 000 digit display, fits 2-200 µL tips.	EMIPR-000100	Unit
Micropipette, 20-200 µL, variable volume, fully autoclavable, 1 µL increment, 000 digit display, fits 2-200 µL tips.	EMIPR-000200	Unit
Micropipette, 100-1000 µL, variable volume, fully autoclavable, 10 µL increment, 0000 digit display, fits 100-1000 µL tips.	EMIPR-001000	Unit
Micropipette stand, for four micropipettes.	EMIPS-S00004	Unit

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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.	EMINR-000005	Unit
Minipipette, 10 µL, fixed volume, for tips upto 200 µL.	EMINR-000010	Unit
Minipipette, 20 µL, fixed volume, for tips upto 200 µL.	EMINR-000020	Unit
Minipipette, 25 µL, fixed volume, for tips upto 200 µL.	EMINR-000025	Unit
Minipipette, 50 µL, fixed volume, for tips upto 200 µL.	EMINR-000050	Unit
Minipipette, 90 µL, fixed volume, for tips upto 200 µL.	EMINR-000090	Unit
Minipipette, 100 µL, fixed volume, for tips upto 200 µL.	EMINR-000100	Unit
Minipipette, 200 µL, fixed volume, for tips upto 200 µL.	EMINR-000200	Unit
Minipipette, 250 µL, fixed volume, for tips upto 200 µL.	EMINR-000250	Unit
Minipipette, 500 µL, fixed volume, for tips upto 200 µL.	EMINR-000500	Unit
Minipipette, 900 µL, fixed volume, for tips upto 200 µL.	EMINR-000900	Unit
Minipipette, 1000 µL, fixed volume, for tips upto 200 µL, with wall mountable stand.	EMINR-001000	Unit
Minipipette stand for 8 minipipettes.	EMINS-S00000	Unit

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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

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ECONOMIC RANGE
pH METERS
SELECTION GUIDE

Model	pH display	Dimension			Calibration Points	Accuracy	Resolution	Weight	Temperature compensation
		width (cm)	depth (cm)	height (mm)					
SWAN EPHSR-004000	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 $Ag/AgCl_2$ electrodes with a standard B-N-C connector

EcoSep
www.ecosep.in

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.	EPHSR-004000	System
pH electrode, glass body combined type, Ag/$AgCl_2$, 80 cm cable length	EPHCS-EGLS80	Unit
pH electrode, epoxy body (unbreakable) combined type, Ag/$AgCl_2$, 80 cm cable length	EPHCS-EEPX80	Unit

Manufactured and Marketed by
TechResource

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EcoSep

Economic Separations

Product Catalog

Horizontal Electrophoresis Apparatus
Vertical Electrophoresis Apparatus
Electroblotting Apparatus
Gel-Documentation
Power Supplies
Micropipettes
Minipipettes
pH Meters

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