

# EcoSep

*Economic Separations*



[www.ecosep.in](http://www.ecosep.in)

Horizontal Electrophoresis Apparatus

Vertical Electrophoresis Apparatus

Electroblotting Apparatus

Gel-Documentation

Power Supplies

Micropipettes

Minipipettes

pH Meters

Power Supply  
Product Catalog



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



**Rugged**

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

**Convenient**

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

**Safety**

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

**Economical**

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

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

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

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

## BEACON

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



Beacon

### Features of this apparatus

#### **Economical**

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

#### **Rugged**

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

#### **Easy-To-Use**

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

#### **Error Minimization**

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

### Ordering description

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

#### **SUGGESTION**

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

**Complete Specifications**

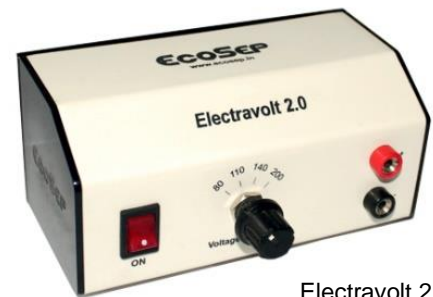
Details	Beacon
Voltage Outputs	80V, 140V
Current Output	Upto 250 mA DC
No. of Outputs	1
Power (Wattage)	35W
Voltage Adjustment	Via rocker switch
Current Adjustment	None
Mode of Regulation	Constant voltage, current limited
Voltage Indicator	None
Timer	None
Autorecovery on power failure	Yes
Set point stays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

## Electravolt Series

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

### Electravolt 2.0

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



Electravolt 2.0

### Electravolt 3.0

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



Electravolt 3.0

### Features of this apparatus

#### Economical

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

#### Rugged

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

#### Easy-To-Use

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

#### Error Minimization

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

### Ordering description

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

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

#### SUGGESTION

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

### Complete Specifications

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

## LIGHTSABER

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



Lightsaber

### Features of this apparatus

#### **Economical**

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

#### **Rugged**

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

#### **Easy-To-Use**

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

#### **Error Minimization**

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

### Ordering description

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

#### **SUGGESTION**

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

### Complete Specifications

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

## SPARK

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



Spark

### Features of this apparatus

#### **Economical**

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

#### **Rugged**

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

#### **Easy-To-Use**

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

#### **Error Minimization**

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

### Ordering description

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

#### **SUGGESTION**

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

**Complete Specifications**

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

# ECOSEP

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