

Electrochemistry & More

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BASi is a pioneer in the development and manufacture of unique instruments for electrochemistry, serving academia and industry. The company was established in 1974 to commercialize an electrochemical detector for liquid chromatography developed by Professor Peter Kissinger. This innovative instrument measured the concentrations of neurologically important molecules with higher precision, at lower detection limits, with less sample preparation, and at much lower cost than other methods. In the more than 40 years since, BASi has grown as an instrument company, with equipment for electrochemistry and in vivo sampling (sampling extracellular matrices by microdialysis or ultrafiltration and blood sampling using the Culex® Automated In Vivo Sampling System), serving both academia and industry with representatives and distributors worldwide. BASi has also developed as a contract research organization (CRO) serving primarily the pharmaceutical industry.

BASi has maintained its position at the forefront of electrochemical instrumentation – the first commercial stand-alone voltammetry instrument, the first commercial microprocessor-controlled electrochemical workstation, the first commercial Windows® electrochemical interface – and has gained a worldwide reputation for quality instruments that are easy to use, reliable and competitively priced.

BASi also manufactures a broad array of accessories for flow and static experiments: flow cells, cell stands and electrodes. This catalog summarizes the current line of electrochemistry products, but please note the most up-to-date information is found on the BASi web site:

www.BASinc.com/products/ec



The Epsilon EClipse™ is the latest electrochemical analyzer manufactured by BASi. It is a potentiostat/galvanostat with a second working electrode for bipotentiostat measurements. It comes with software that enables the most popular electrochemical techniques such as cyclic voltammetry, chronoamperometry, and chronopotentiometry.

Part Number

EF-1031 Epsilon EClipse™ Electrochemical Analyzer Potentiostat/Galvanostat

Specifications

- Applied potential range: ± 3.275 V and ± 10 V
- Compliance voltage range: ± 12 V
- Current range: ± 100 mA (10 pA – 100 mA)
- Potential resolution: 0.1 mV for 3.275 V range and 0.33 mV for 10 V range

Features

- Potentiostat/Galvanostat
- Bipotentiostat
- Control BASi cell stands
- Easy access front connector location for all electrochemical cell and cell stands
- Positive feedback iR compensation
- Internal dummy cells for hardware test
- Analog filtering and digital smoothing

The C3 Cell Stand is a general-purpose accessory for electroanalytical experiments. It provides a base to support the cell vial and a mounted cell top to hold the electrodes. The base also contains a magnetic stirrer, and there are lines for inert gas purging. Stirring and gas purging are available by remote control with BASi PC-controlled potentiostats. The standard package contains all accessories needed to run basic electrochemistry experiments



Part Number

EF-1085 C3 Cell Stand

Standard Package

- Glassy carbon working electrode
- Platinum working electrode
- Ag/AgCl reference electrodes (+ storage vial)
- Platinum auxiliary electrode
- PK-4 working electrode polishing kit
- Standard cell vials
- Low-volume cell vials
- Stir bar
- Cell lead clips
- Gas line tubing

Features

- Faraday cage for low current measurements
- Dual gas lines for purge and blanket
- Cell lead connects directly to all BASi potentiostats (other potentiostats require modification of the cell lead)
- Optional water-jacketed cell vial

Accessories

MF-1208 Glass cell vial for Voltametry 5-15mL 12/pk

The CGME is a mercury drop electrode that can be used as a Dropping Mercury Electrode (DME), a Static Mercury Drop Electrode (SMDE) (e.g., for polarography), and a Hanging Mercury Drop Electrode (HMDE) (e.g., for anodic stripping voltammetry). The mercury drop is grown by opening a fast-response valve, and drop size is determined by the length of time the valve is open, which allows a wide range of drop sizes.

Part Number

EF-1400 CGME - Controlled Growth Mercury Electrode

Standard Package

- Cell stand with magnetic stirrer and gas purge capabilities
- 150 μm ID glass capillary
- Ag/AgCl reference electrodes (+ storage vial)
- Platinum wire auxiliary electrode
- Standard glass and low-volume cell vials
- Stir bar
- Startup kit (vacuum pump, syringe + needle, tubing)
- Mercury pickup tool
- Plastic spill tray

Features

- Standard addition port
- Manual and remote control of knock/dispense functions
- Optional water-jacketed cell vial
- Cell top compatible with BASi voltammetry electrodes
- Optional 100 μm bore capillary for DME experiments



The BASi RDE-2 is a rotator system for both fixed rotation rate and hydrodynamic modulation rotating disk electrochemical experiments. Rotation rates from 50 to 10,000 RPM are available with better than 1% accuracy. The rotator unit is manually raised and lowered, and can be inverted for spin-coating. Rotation functions can be controlled remotely using a BASi PC-controlled potentiostat, or manually.

Part Number

EF-1100 RDE-2 Rotating Disk Electrode

Standard Package

- Cell stand with gas purge capabilities
- Glassy carbon working electrode
- Ag/AgCl reference electrodes (+ storage vial)
- Platinum wire auxiliary electrode
- PK-4 working electrode polishing kit
- Cell vials
- Gas line tubing

Features

- Compatible with BASi stationary voltammetry electrodes
- Standard addition port
- Easy and rapid exchange of electrodes
- Low-noise electrode contact
- Excellent rotation speed accuracy, acceleration and deceleration
- Cell volume approximately 10 mL
- Optional water-jacketed cell vial





Disk Electrodes

- CTFE body (chemically inert, mechanically stable)
- 1.6 mm or 3 mm diameter disk
- Variety of materials (e.g., glassy carbon, platinum, gold, etc.)
- Custom fabrication available

Microelectrodes

- Wire or fibers (5 – 100 μm)
- Platinum wire, gold wire or carbon fiber
- Custom fabrication available

Microelectrode

MF-2005 10 μm Platinum

MF-2006 10 μm Gold

MF-2007 11 μm ($\pm 2 \mu\text{m}$) Carbon Fiber

MF-2150 100 μm Platinum

Rotating Disk Electrodes

- CTFE body (chemically inert, mechanically stable)
- Screws onto shaft of RDE-1 or RDE-2
- Variety of materials (e.g., glassy carbon, platinum, gold)
- Custom fabrication available

Selected Part Numbers

Voltammetry

EF-1368 Edge Plane Pyrolytic Graphite (3.0 mm)

MF-2012 Glassy Carbon (3.0 mm)

MF-2013 Platinum (1.6 mm)

MF-2113 Platinum (3.0 mm)

MF-2014 Gold (1.6 mm)

MF-2110 Copper Electrode (3.0 mm)

MF-2114 Gold (3.0 mm)

MF-2018 Palladium (3.0 mm)

MF-2016 Nickel (3.0 mm)

MF-2011 Silver (3.0 mm)

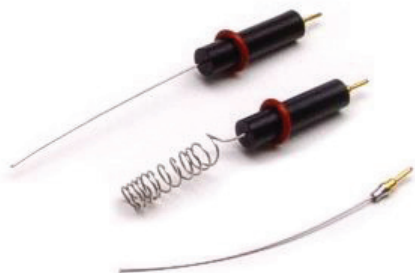
MF-2024 Working Electrode Holder

RDE

MF-2066 Glassy Carbon (3 mm)

MF-2067 Platinum (3 mm)

MF-2068 Gold (3 mm)



Reference Electrodes

- Ag/AgCl aqueous reference electrodes (ceramic or porous glass frit)
- Saturated calomel reference electrode (mercury not provided)
- Ag/Ag+ non-aqueous reference electrode
- Double-junction chamber
- EF-1352 Calomel Reference Electrode
- EF-1354 Chloride Free Reference Electrode
- EF-1369 Alkaline Reference Electrode

Auxiliary Electrodes

- Straight platinum wire electrodes (for stationary solution experiments)
- Coiled platinum wire electrode (for higher current experiments)
- MW-4130 Platinum Auxillary Electrode
- MW-4131 Graphite Rod Electrode

Selected Part Numbers

Reference Electrodes

- MW-2052 Ag/AgCl (long, glass tip)
- MW-2030 Ag/AgCl (short, ceramic tip)
- MF-2062 Non-aqueous Reference Electrode Kit
- MF-2063 Copper Sulfate Reference Electrode
- MW-2021 RE-4 Ag/AgCl Reference Electrode

Auxiliary Electrodes

- MW-1032 Straight Platinum Wire (7.5 cm)
- MW-1033 Coiled Platinum Wire (23 cm)
- MW-4132 Platinum Mesh Electrode

Reference Electrode Accessories

- MF-2064 Replacement Coralpor for Reference Electrode
- MF-2030 RE-6 Ag/AgCl Reference Electrode with flexible wire connector
- MR-5275 Reference Electrode Storage Vial with cup

Working Electrodes

Standard Disc Electrodes

- MF-2012** Glassy Carbon Electrode (GC)
3.0 mm diameter (2.997mm-2.972mm)
- MF-2010** Electrode Body 2.87 mm ID Carbon Paste Electrode (CP):
purchase CF-1010
carbon paste separately.
- EF-1368** Edge Plane Pyrolytic Graphite – 3.0 mm diameter
- MF-2110** Copper Electrode (Cu) - 3.0 mm diameter
- MF-2014** Gold Electrode (Au) - 1.6 mm diameter (1.651mm-1.626mm), 99.95% purity
- MF-2114** Gold Electrode (Au) - 3.0 mm diameter (2.997mm-2.972mm), 99.95% purity
- MF-2016** Nickel Electrode (Ni) - 3.0 mm diameter (2.997mm-2.972mm), 99.90% purity
- MF-2018** Palladium Electrode (Pd) - 3.0 mm diameter (3mm-2.975mm) 99.99% purity
- MF-2013** Platinum Electrode (Pt) - 1.6 mm diameter (1.651mm-1.626mm), 99.95% purity
- MF-2113** Platinum Electrode (Pt) - 3.0 mm diameter (2.997mm-2.972mm), 99.95% purity
- MF-2011** Silver Electrode (Ag) - 1.6 mm diameter (1.588mm-1.562mm), 99.95% purity
- Ask BASi** Custom Voltammetry Electrodes: (Al, Ir, Ti, Ta, etc.)



Extras:

- CF-1010** Carbon Paste (CPO) (1 g): paste of uniform graphite particles mixed with a paraffin binder (for use in aqueous media)
- MF-2024** Working Electrode Holder (Cu alligator clip)

Microelectrodes

- MF-2005** Platinum (Pt) Microelectrode – 10 μm
- MF-2006** Gold (Au) Microelectrode – 10 μm
- MF-2007** Carbon Fiber Microelectrode – 11 μm ($\pm 2 \mu\text{m}$)
- MF-2150** Platinum (Pt) Microelectrode – 100 μm



Flow Cell Electrodes

- MF-1000** Dual Glassy Carbon Electrode – 3 mm
- MF-1002** Dual Gold (Au) Electrode – 3 mm
- MF-1008** Dual Silver (Ag) Electrode – 3 mm
- MF-1012** Dual Platinum (Pt) Electrode – 3 mm
- MF-1004** Carbon Paste Electrode – 3 mm (needs CF-1010 Carbon Paste)
- MF-1095** Single Glassy Carbon Electrode
- MF-1032** Single Silver (Ag) Electrode – 3 mm
- MF-1030** Single Gold (Au) Electrode – 3 mm
- MF-1031** Single Platinum (Pt) Electrode – 3 mm
- MF-1015** Single Glassy Carbon Electrode – 6 mm



High Surface Area Electrodes

- MF-2077** Reticulated Vitreous Carbon Electrode.
Dimensions: 50 mm high, 40 mm diameter, 5 mm thick
10.5 cm²/cm² surface area
- NM-D001** Platinum gauze (90/10 platinum/iridium alloy) outer electrode.
Dimensions: 50.0 mm height, 38.0 mm diameter, 16.0 g weight
- NM-D002** Platinum gauze (90/10 platinum/iridium alloy) inner electrode.
Dimensions: 40.0 mm height, 32.0 mm diameter, 14.0 g weight
- MW-4132** Platinum mesh electrode. Dimensions: 2.0 cm x 2.0 cm, 0.1 mm wire diameter, 99.9% purity



Reference Electrodes

Ag/AgCl Standard Reference Electrodes

- MF-2052** RE-5B Ag/AgCl (3M NaCl) Reference Electrode with Flexible Connector
- MF-2056** RE-5B Ag/AgCl (3M KCl) Reference Electrode with Flexible Connector

Ag/AgCl Electrochemical Flow Cell Reference Electrodes

- MW-2030** RE-6 Reference Electrode with Flexible Connector
- MW-2021** RE-4 Ag/AgCl Reference Electrode
Non-aqueous Ag/Ag⁺ Reference Electrode Kit
- MF-2062** Non-aqueous Reference Electrode Kit



Other Reference Electrodes

- EF-1352** Calomel Reference Electrode
- EF-1354** Hg₂SO₄ (sat. K₂SO₄) Chloride-Free Reference Electrode
- EF-1369** Hg/HgO (1M NaOH, NaOH not included) Alkaline Reference Electrode
- MF-2063** Cu/CuSO₄ Reference Electrode

Counter/Auxiliary Electrodes

Platinum Wire Auxiliary Electrodes

- MW-1032** Platinum Wire Auxiliary Electrode (7.5 cm), with gold-plated connector, mounted in CTFE cylinder.
For use with the C-2 and the C-3 Cell Stands.
- MW-1033** Coiled Platinum Wire Auxiliary Electrode (23 cm), with gold-plated connector, mounted in CTFE cylinder. For use with the RDE-1, the RDE-2, and the bulk electrolysis cell.
- MW-4130** Platinum Wire Auxiliary Electrode (6.5 cm) with gold-plated connector for use with the C1 Cell Stand, the VC-2 Voltammetry Cell, and in the Low Volume Cell for the C-2 and C3 Cell Stands.
- MW-4131** Graphite rod (6 mm diameter and 7.5 cm height) with a gold-plated connector.
- MW-4132** Platinum mesh electrode. 2.0 cm x 2.0 cm, 0.1 mm wire diameter, 99.9% purity

Auxiliary Electrochemical Detector Electrodes For Thin-layer Flowcell

- MF-1093** Cross-Flow with Downstream Reference
- MF-1092** Cross-Flow with Reference Port
- MF-1091** Radial Flow



Screen Printed Electrodes

AC1 – This screen printed amperometric sensor has three electrodes and is formed on a corundum base. It is 2.54 cm long, 0.73 cm wide, 0.63 mm thick, and weighs 0.5 grams. The diameter of the working electrode area is 1.00 mm \pm 0.05 mm. There is a silver electrical contact at the end of each sensor and this conductive path is covered by a dielectric protection layer. They can be ordered in multiples of 20 sensors. The PALM-SPEHOLDER is an appropriate adapter for these sensors.

BVT-AC1-W1-RS	Gold working and auxiliary electrode with silver reference electrode
BVT-AC1-W1-R2	Gold working and auxiliary electrode with silver/silver chloride reference electrode
BVT-AC1-W2-RS	Platinum working and auxiliary electrode with silver reference electrode
BVT-AC1-W2-R2	Platinum working and auxiliary electrode with silver/silver chloride reference electrode
BVT-AC1-W3-RS	Silver working and auxiliary electrode with silver reference electrode
BVT-AC1-W3-R2	Silver working and auxiliary electrode with silver/silver chloride reference electrode
BVT-AC1-W4-RS	Graphite working and auxiliary electrode with silver reference electrode
BVT-AC1-W4-R2	Graphite working and auxiliary electrode with silver/silver chloride reference electrode

AC9C – This screen printed amperometric sensor has nine electrodes, eight working electrodes and one reference electrode. It is formed on a corundum base. It is 5.9 cm long, 1.3 cm wide, 0.63 mm thick, and weighs 1.7 grams. The diameter of the working electrode areas are 1.00 mm \pm 0.05 mm. There is a silver electrical contact at the end of each sensor and this conductive path is covered by a dielectric protection layer. They can be ordered in multiples of 5 sensors. The BVT-KA9s is an appropriate adapter for these sensors.

BVT-AC9C-W1-RS	Gold working electrodes with silver reference electrode
BVT-AC9C-W1-R2	Gold working electrodes with silver/silver chloride reference electrode
BVT-AC9C-W2-RS	Platinum working electrodes with silver reference electrode
BVT-AC9C-W2-R2	Platinum working electrodes with silver/silver chloride reference electrode
BVT-AC9C-W3-RS	Silver working electrodes with silver reference electrode
BVT-AC9C-W3-R2	Silver working electrodes with silver/silver chloride reference electrode
BVT-AC9C-W4-RS	Graphite working electrodes with silver reference electrode
BVT-AC9C-W4-R2	Graphite working electrodes with silver/silver chloride reference electrode

CC1 – This screen printed amperometric sensor has two interdigitated electrodes and is formed on a corundum base. It is 2.54 cm long, 0.73 cm wide, 0.63 mm thick, and weights 0.4 grams. The dimensions of the interdigitated electrode area is 2.00 mm \pm 0.05 mm by 2.00 mm \pm 0.05 mm. There is a silver electrical contact at the end of each sensor and this conductive path is covered by a dielectric protection layer. They can be ordered in multiples of 20 sensors. The PALM-SPEHOLDER is an appropriate adapter for these sensors.

BVT-CC1-W1	Gold interdigitated electrodes
BVT-CC1-W2	Platinum interdigitated electrodes
BVT-CC1-W3	Silver interdigitated electrodes
BVT-CC1-W4	Graphite interdigitated electrodes

Biosensor – This screen printed amperometric sensor has three electrodes and is formed on a corundum base. It is 2.54 cm long, 0.73 cm wide, 0.63 mm thick, and weights 0.5 grams. The diameter of the working electrode area is 1.00 mm \pm 0.05 mm. There is a silver electrical contact at the end of each sensor and this conductive path is covered by a dielectric protection layer. A biochemically active enzyme is immobilized on the surface of the working electrode area to create the biosensor. They can be ordered in multiples of 25 sensors. The PALM-SPEHOLDER is an appropriate adapter for these sensors.

BVT-AC1-ACE	Acetylcholinesterase is immobilized on a platinum working electrode. The sensor has a platinum auxiliary electrode and a silver reference electrode
BVT-AC1-GO	Glucose oxidase is immobilized on a platinum working electrode. The sensor has a platinum auxiliary electrode and a silver reference electrode.

This cell is designed for complete electrolysis of a species in solution, as required for bulk electrolysis and controlled potential coulometry. Ideal for small-scale electrosynthesis (mg quantities).

Part Number

MF-1056 Bulk Electrolysis Cell Kit

NM-D001 Platinum gauze (90/10 Platinum/iridium alloy) outer electrode

NM-D002 Platinum gauze (90/10 Platinum/iridium alloy) inner electrode

Features

- Large surface area working electrode (reticulated vitreous carbon)
- Chamber for isolating auxiliary electrode
- Optional platinum gauze electrode
- Optional water-jacketed vial



Cell Vials and Cell Tops

Replacement cell vials for all BASi cell stands, including low-volume and water-jacketed vials.

Part Number

MR-1208 Replacement cell vial for C-3 Cell Stand, CGME, and RDE-2 (12/pkg)

MF-1084 Low-volume cell vial for C-3 Cell Stand, CGME, and RDE-2 (6/pkg)

MR-1212 Water-jacketed cell vial for C-3 Cell Stand, CGME, and RDE-2

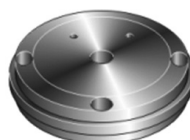
MR-1205 Teflon® Cell Vial for C-3 Cell Stand, CGME, and RDE-2

MR-3818 Teflon® Cell Top for C-3 Cell Stand and CGME

MR-3839 Teflon® Cell Top for RDE-2



MR-3839



MR-3818

For a complete listing:

www.BASinc.com/products/ec

**Teflon® is registered trademark of E.I. du Pont de Nemours and Company*

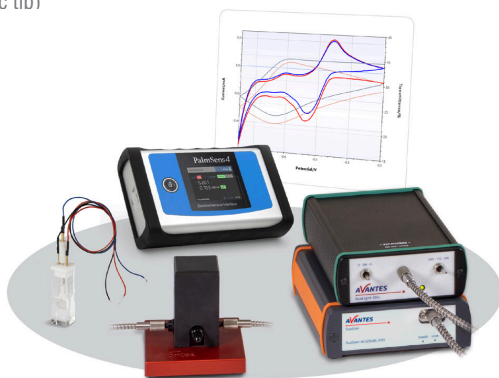
Spectroelectrochemistry couples the ability of an electrochemical experiment to change the oxidation state of a solution species with the structural and quantitative capabilities of spectroscopy. This cell is the combination of a thin-layer electrochemical vessel and a quartz cuvette (0.5 mm or 1 mm path length) designed to be used in a standard UV-VIS spectrometer.

Part Numbers

- EF-1350 Spectroelectrochemical Cell w/Platinum minigrid, 1mm
- EF-1351 Spectroelectrochemical Cell w/Gold minigrid, 1mm
- EF-1362 Spectroelectrochemical Cell w/Platinum minigrid, 0.5mm
- EF-1363 Spectroelectrochemical Cell w/Gold minigrid, 0.5mm

Features

- Monitor in real time the chromic changes associated with a reduction/oxidation reaction including reactant, intermediate(s) and/or final product(s) by spectroscopic means.
- Platinum and Gold mini-grid electrodes are available.
- Uses standard BASi reference electrode (purchased separately).
- Kit includes:
 - Thin-layer quartz cuvette (1mm path length)
 - Platinum or gold minigrid working electrode
 - Platinum wire auxiliary electrode
 - Teflon® cap
 - Chemically inert plastic purge tube
- Additional electrodes not included:
 - MF-2052 - Ag/AgCl (long, glass tip)
 - MW-2030 - Ag/AgCl (short, ceramic tip)
 - MF-2062 - Ag/Ag+ Non-Aqueous F





BASi marketed the first commercial electrochemical thin-layer flow cell in 1974. Since then, the company has developed a number of flow cells for different LC applications. These electrodes consist of a working electrode, an auxiliary electrode, and a reference electrode. These work together with the electrochemical detector to apply a controlled potential for your sample to flow across, and be oxidized or reduced. The electrochemically-active surface of the working electrode may be glassy carbon, copper, gold, nickel, platinum, copper, or mercury/silver.

Part Numbers

MW-5051 Radial-Flow Cell Kit

MW-5052 Cross Flow Cell Kit

MF-1091 Auxiliary Electrode - Radial Style "F"

MF-1092 Auxiliary Electrode - Cross-flow Style

MF-1093 Auxiliary Electrode - DS Cross-flow Style

Features

- Three electrode system (Working, Auxiliary, Reference) ensures stable applied potential
- Cross flow and radial flow versions
- Multiple flow cells for different LC applications
- Low dead volume
- Single-, dual-, or multi-electrode options
- Parallel or series orientation relative to flow
- Variety of working electrode materials
- Compatible with BASi Wired Enzyme Electrodes
- True thermodynamic Ag/AgCl reference electrode
- Easy removal of working electrode

The PK-4 Polishing Kit contains material to polish working electrodes in order to regenerate an electrochemically-active electrode surface. It is suitable for all types of working electrodes. Includes glass plates, polishing pads and polishing suspensions (alumina and diamond polish).



Part Number

MF-2060 PK-4 Polishing Kit

Features

- Substrates
 - Fine grit pads (Quantity:5) (Dimensions: 2 7/8" diameter circles)
 - Texmet/alumina pads (Quantity:5) (Dimensions: 2 7/8" diameter circles)
 - Nylon/diamond pads (Quantity:10) (Dimensions: 2 7/8" diameter circles)
- Polishing Suspensions
 - **MF-2051** 15 μm coarse diamond polish (Volume: 2 mL)
 - **MF-2059** 3 μm fine diamond polish (Volume: 3 mL)
 - **MF-2054** 1 μm very fine diamond polish (Volume: 3 mL)
 - CF-1050 0.05 μm alumina polish (Volume: 7 mL)
- Polishing Plates
 - **MR-2128** Polishing glass plate (2)

The PalmSens4 is a potentiostat and galvanostat with optional electrochemical impedance spectroscopy (EIS). It has low noise, high current resolution, and a large potential range. It is a complete laboratory instrument with a rugged design that is ideal for field work. This portable instrument has 4 GB of internal data storage and built-in Bluetooth communication which enables the device to be controlled with PStTrace PC software or an Android app called PSTouch. PStTrace is included with the instrument and PSTouch is available for free download in the Google Play store.

Specifications

Applied potential range: ± 5 V or ± 10 V

Compliance voltage: ± 10 V

Potential resolution: 0.075 mV

Potential accuracy: 0.1%

Current ranges: 100 pA to 10 mA (9 ranges)

Maximum current: ± 30 mA typical

Current resolution: 0.1 of current range

Current accuracy: 0.006% of current range (5 fA on 100 pA range)

Frequency minimum: 10 μ Hz

Frequency maximum: 100 kHz or 1 MHz

Size: 15.7 cm x 9.7 cm x 3.5 cm

Weight: 500 g

Battery: > 16 hours with cell off, > 4 hours with continuous cell on at maximum, extendable with powerbank



Part Numbers

PALM-PS4.F0.05	PalmSens4 with ± 5 V and no EIS
PALM-PS4F105	PalmSens4 with ± 5 V and 100 kHz EIS
PALM-PS4F205	PalmSens4 with ± 5 V and 1 MHz EIS
PALM-PS4.F0.10	PalmSens4 with ± 10 V and no EIS
PALM-PS4.F1.10	PalmSens4 with ± 10 V and 100 kHz EIS
PALM-PS4F210	PalmSens4 with ± 10 V and 1 MHz EIS

Techniques available with PStTrace Software (included with the instrument)

Linear sweep voltammetry	Fast amperometry
Cyclic voltammetry	Chronopotentiometry
Differential pulse voltammetry	Stripping chronopotentiometry
Square wave voltammetry	Open circuit potentiometry
Normal pulse voltammetry	Multistep amperometry
Stripping voltammetry	Multistep potentiometry
AC voltammetry	Potential scan impedance spectroscopy
Chronoamperometry	Time scan impedance spectroscopy
Pulsed amperometric detection	Fixed potential impedance spectroscopy
Multiple pulse amperometry	



Part Numbers

Multiplexers

PALM-MUX08R2	8-channel multiplexer
PALM-CBL-MUX08R2-DC	Daisy chain cable for the 8-channel multiplexer
PALM-CBL-MUX08R2SNS5	Sensor cable for the 8-channel multiplexer
PALM-CBL-MUX08R2Y4L	Y-cable for the 8-channel multiplexer and EmStat3 Blue
PALM-CBL-MUX08R2Y5L	Y-cable for the 8-channel multiplexer and PalmSens4

Stir Plate

PALM-STIRRER-DIN	Magnetic stirrer with switch box for the PalmSens4
PALM-SWITCH-DIN	Switch box for automatic control for the PalmSens4
PALM-PS3-STIRRER	Magnetic stirrer with switch box for the PalmSens3 and EmStat3 Blue
PALM-PS3-SWITCH	Switch box for automatic control for the PalmSens3 and EmStat3 Blue

Temperature Sensor

PALM-LM35-DIN	Temperature sensor for the PalmSens4
PALM-LM35-DUB15T	Temperature sensor for the PalmSens3 and EmStat3 Blue

Connectors

PALM-SPEHOLDER	Screen printed electrode connector 2mm banana connector
PALM-CONN-4L	Screen printed electrode connector for the EmStat3 Blue
PALM-CONN-5L	Screen printed electrode connector for the PalmSens4
PALM-CROC8EXT	Crocodile clips for the 8 channel multiplexer
PALM-CROCCLIPS	Crocodile clips (4)

Cables

PALM-CBL-SNS-5L-4	Sensor cable for the PalmSens4
PALM-SENS3+STND-LM	Sensor cable for the EmStat3+
PALM-SENSSTND-LM	Sensor cable for the EmStat3 and PalmSens3
PALM-CBL-SNS-5L-BIPO	Sensor cable for the bipotentiostat PalmSens4

Other

PALM-BATT-PS4	Replacement battery for the PalmSens4
PALM-DUMMYCELL	Dummy cell
PALM-GI-USB	Galvanic isolation dongle

BASIC ELECTROCHEMICAL CELLS

This cell is designed to conduct standard three electrode based electrochemistry analysis with options for purge, stir and a secondary compartment for counter electrodes.

PART NUMBERS:

- > **MF-1054** Jacketed Three Electrode Electrochemical Cell
- > **MF-1051** Standard Three Electrode Cell

FEATURES:

- > Option for disc or ITO type working electrode
- > Separate chamber for counter electrode
- > Purge option available



LOW VOLUME ELECTROCHEMICAL CELL

This cell is designed to conduct extremely nano scale electrocatalysis measurements on micro-liter volumes, single droplets and monolayers.

PART NUMBERS:

- > **MF-2141** Standard Low Volume Cell Kit
- > **MF-2145** Standard Jacketed Low Volume Cell Kit

FEATURES:

- > Option for disc or ITO type working electrode
- > Separate chamber for counter electrode
- > Purge option available



ELECTROCHEMICAL H-CELL

This cell is designed to conduct standard dual compartment based electrochemistry analysis with options for purge, thermal control and detachable membrane assembly.

PART NUMBERS:

- > **IP-HC50** Standard H-Cell Kit
- > **MF-2024** Working Electrode Holder (Alligator clip)

FEATURES:

- > Disc or ITO type working electrode
- > Separate chamber for counter electrode
- > Available in 25-1000 ml Volume
- > Option for thermal control available



PHOTO-ELECTROCHEMICAL CELL KIT

This cell is designed to conduct light-based electrocatalysis research on DSSC solar cells, electrochromic materials and organic light emitting diodes.

PART NUMBERS:

- > **IP-PECUWC50** Photo-EC Cell Kit with Lid
- > **MF-2024** Working Electrode Holder (Alligator clip)

FEATURES:

- > Disc or ITO type working electrode
- > Available in 25-1000 ml Volume
- > Option for thermal control available

APPLICATIONS:

- > Photo / electrochromism
- > Solar cell studies
- > Artificial photosynthesis
- > Light based water splitting
- > Light activated catalysis



PHOTO-ELECTROCHEMICAL H-CELL

This cell is designed to conduct photo based electrochemistry research in dual compartments with options for purge, thermal control and detachable membrane assembly.

PART NUMBERS:

- > **IP-PECHC50** Standard Photo-EC H-Cell Kit
- > **MF-2024** Working Electrode Holder (Alligator clip)

FEATURES:

- > Disc or ITO type working electrode
- > Quartz window for light emission
- > Available in 50-1000 ml Volume
- > Option for thermal control

APPLICATIONS:

- > Photo-based Water Splitting
- > Electrochromism
- > Electrochemical luminescence intensity
- > Solar Cells
- > Spectro-electrochemistry



1L ASTM GRADE CORROSION CELL

The IP-U-1L-CCWJ is a fully equipped, vertically mounted, and ASTM G59-97 grade jacketed type corrosion cell set-up that can be used with any Potentiostat / Galvanostat / Impedance Analyzer in the world.

This set-up heavily suits the petroleum, automobile and other such industrial level corrosion labs that have a high through-put requirement for a very direct ASTM grade corrosion measurement for quality control, new inhibitor or coatings test, and plant safety.

PART NUMBER:

> **IP-U-1L-CCWJ** ASTM grade 1L Corrosion Cell Kit

STANDARD PACKAGE:

- > Reference Electrode
- > Counter Electrode
- > Jacketed 1L Multi-port vessel
- > Lugging Capillary
- > Purge and vent option
- > Three types of Sample Holders with sample coupon
- > All accessories included

FEATURES:

- > Available in 500 mL or 1000 mL volumes
- > Option for pH / temperature monitoring
- > Thermal control with Jacketed vessel
- > Sample holders:
 - > Button type for circular coupons
 - > Clip type for flat coupons
 - > Threaded type for cylindrical coupons



APPLICATIONS:

- > ASTM G59-97 Potentiodynamic corrosion test
- > Critical pitting test and analysis
- > Evan's curve analysis
- > Diffusion based research for corrosion mechanism
- > EIS based coating inhibitor / paint resistance analysis
- > Electrochemical Noise / ZRA Analysis
- > Step-wise dissolution measurement
- > Galvanic cycling analysis

NEW AND IMPROVED RDE-2 CELL STAND FOR LIQUID INHIBITOR STUDY

The BASi RDE-2 is a rotator system for both fixed rotation rate and hydrodynamic modulation rotating disk electrochemical. Rotation rates from 50 to 10,000 RPM are available with better than 1% accuracy. BASi's new C1018 carbon steel onto the redesigned RDE-2 electrode body holder (PCTFE) for an easy and low-cost option to conduct corrosion to liquid inhibitor efficiency for corrosion resistance.

PART NUMBER:

- > **EF-1100** RDE-2 Rotating Disk Electrode Cell Stand

STANDARD PACKAGE:

- > Cell stand with gas purge capabilities
- > Glassy carbon working electrode
- > Ag/AgCl reference electrodes (+ storage vial)
- > Platinum wire auxiliary electrode
- > PK-4 working electrode polishing kit

FEATURES:

- > Compatible with BASi stationary voltammetry electrodes
- > Standard addition port for adding inhibitors
- > Easy and rapid exchange of disposable SS inserts
- > Low-noise electrode contact
- > Excellent rotation speed accuracy

APPLICATIONS:

- > Corrosion mechanism research
- > Kinetics evaluation for liquid inhibitors
- > Film forming amines studies
- > Step-wise dissolution analysis
- > EIS based film resistance studies in pipelines



Also Available

ELECTROCHEMICAL H-CELL FOR HYDROGEN PERMEATION STUDIES

COATING EVALUATION TEST CELL

GALVANIC CORROSION TEST

WELDED JOINT TEST CELL

EIS PLUS CORROSION ANALYSIS KIT



BASIC EIS CORROSION PACKAGE

This package is designed to provide a highly effective yet cost-effective solution set to modern day corrosion researchers, scientists and engineers. The EmStat 4S High Resolution potentiostat / galvanostat with EIS is packaged with 1000 mL corrosion cell kit, corrosion manual and other accessories to measure / monitor corrosion rates on newly developed inhibitors, coatings and films.



STANDARD CORROSION ANALYSIS PACKAGE

This package is designed to provide a cost-effective solution set to early-stage corrosion researchers, analysts, scientists and engineers. The non-EIS version of EmStat 4S High Resolution potentiostat / galvanostat is packaged with 1000 mL corrosion cell kit, corrosion manual and other accessories to conduct basic corrosion measurements such as LPR, OCP and ZRA analysis.



Standard & Custom Electrodes



pH, ORP, Conductivity, Dissolved Oxygen, ION-selective and Reference electrodes.

