Portfolio Highlights

PEOPLE YOU CAN TRUST

Metrohm means … Spectroscopy!

Metrohm DropSens

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"Our goal is to design products that make your research easier"

Meet Metrohm DropSens: a technology-based company specialized in the development of complete solutions for electrochemical analysis.

Based in Oviedo, Asturias (Spain), Metrohm DropSens is a leading company in R&D, design and manufacturing of high quality products for electrochemical, spectroelectrochemical and electrochemiluminescence analysis in the laboratory and for POC testing, suitable for multiple applications and sectors.

Among the wide range of products available, you can find a large assortment of screen-printed electrodes, interdigitated electrodes and microelectrodes. In addition, your will also find portable instruments operated by powerful and easy to use dedicated software, and a large family of accessories to facilitate the use of all products.

Spectroelectrochemical instruments

- SPELECRAMAN
- SPELECRAMAN638
- SPELECRAMAN532
- SPELEC
- SPELEC1050
- SPELECNIR

Find out all details about the instruments here

Synchronize electrochemical and spectroscopic measurements in only one software and with only one instrument thanks to the SPELEC line

An integrated solution consisting of a bipotentiostat/galvanostat combined with a spectrometer and a light source: laser for RAMAN measurements, deuterium/halogen lamps for VIS-UV measurements and tungsten halogen lamp for NIR measurements. Suitable to be used with a very simplified set-up for screen-printed electrodes or with any other cell for conventional electrodes.

All instruments are controlled by a dedicated software for spectroelectrochemistry, DropView SPELEC, which provides functions such as:

- Shutter lamp control (automatic dark and reference) and power laser control.
- Real time panel that collects the generated spectra continuously at any time.
- 3D plotting of curves.
- Spectroscopic measurements shown in counts, absorbance, transmittance or reflectance during the electrochemical process.
- Plot of optical spectra vs. electrochemical curve at a specified wavelength.
- Plot overlay, peak integration, smoothing, subtraction, derivative curve, baseline fitting.
- Export to .csv all synchronized data.

	SPELECRAMAN	SPELECRAMAN532	SPELECRAMAN638	SPELEC	SPELEC1050	SPELECNIR
Light source	785 nm (laser)*	532 nm (laser)*	638 nm (laser)*	200-400 nm (deuterium) 350-2500 nm (tungsten halogen)	200-400 nm (deuterium) 350-2500 nm (tungsten halogen)	350-2500 nm (tungsten halogen)
Spectrometer	35 – 3000 cm-1 (787 – 1027 nm)	65 – 4550 cm-1 (534 – 702 nm)	50 – 4370 cm-1 (640 – 885 nm)	200-900 nm	350-1050 nm	900-2200 nm
Potentiostat	±4 V ±40 mA	±4 V ±40 mA	±4 V ±40 mA	±4 V ±40 mA	±4 V ±40 mA	±4 V ±40 mA

* Other laser wavelengths are available upon request

Electrochemiluminescence instruments

- SPECTROECL
- STATECL

Find out all details about the instruments here

Portable instruments that allow you to perform electrochemiluminescence (ECL) measurements thanks to a bipotentistat/galvanostat synchronized to a cell with a detector for screen-printed electrodes.

Two models of cells depending on the detector to be used are available: one cell with a micro-spectrometer that will allow you to differentiate between wavelengths (multianalyte detection) and another cell with a photodiode (ref. ECLPHOTODIODCELL) that will provide you information on total intensity of the luminophore under evaluation.

SPECTROECL
SpectroElectrochemiluminescence instrument

SpectroECL can be used in combination with both cells if required. Runs with DropView SPELEC software with dedicated features for spectroelectrochemiluminescence allowing you to obtain, in real time, luminescent spectrum, relating wavelength emission potential and ECL intensity.

Spectrometer	
Detector	High sensitivity CMOS image sensor
Wavelengths range	340-850 nm
Potentiostat	±4 V ±40 mA

STATECL
Electrochemiluminescence instrument

µStat ECL is used in combination with ECLPHOTODIODCELL. DropView 8400 software allows to amplify (with up to 100 gain) the ECL signal and to obtain at the same time in the same plot the ECL signal and the electrochemical measurement.

Photodiode	
Detector	Silicon Photodiode
Wavelengths range	340-1100 nm
Potentiostat	±4 V ±40 mA

Electrochemical instruments
Multichannel potentiostats

- STAT-I-MULTIX
- STAT8000 / STAT8000P
- STAT4000 / STAT4000P

Find out all details about the instruments here

STAT-I-MULTIX
Multichannel bipotentiostat/galvanostat/impedance analyzer (MultiplEIS®)

This is not just a potentiostat: µStat-i MultiX is a multi-user experience of efficiency, versatility, and reliability. Choose the right configuration, combine multiple channels, users and disciplines, work remotely and support your research with DropView 8400M software.

- One equipment for several users with flexibility at their location thanks to **remote connection**.
- Multiply your work and save time with up to 16 dual channels.
- Expand the number of channels at any time.
- Suitable for sensor development, corrosion, fundamental electrochemistry, electrocatalysis, hydrogen permeation, coin-cell batteries, among others.

µStat-i MultiX	
Operating modes	bipotentiostat/galvanostat/impedance analyzer (MultipIEIS®)
Number of channels	4 (µStat-i Multi4), 8 (µStat-i Multi8), 12 (µStat-i Multi12), 16 (µStat-i Multi16)
Expandability	In groups of 4 channels
WEs sharing RE and AE	Up to 16 multipotentiostat and multigalvanostat
Potential range	± 4 V
Maximum current	± 40 mA
Current ranges	±1 nA to ±10 mA (8 ranges)
EC techniques	25 (voltammetry, amperometry, EIS, galvanostat, mixed techniques)
EIS frequency range	1 mHz to 1 MHz
Computer interface	USB or remote connection
Multi-user	Remote connection via intranet/VPN through a host PC
Galvanic isolation (floating mode)	Optional

"First class and certified electrochemical solutions"

STAT8000
Portable 8 channel potentiostat/galvanostat

µStat 8000 allows simultaneous electrochemical measurements (with the same or different techniques) in up to 8 channels that act totally independently; it also includes a multichannel mode, that acts as a potentiostat with up to 8 working electrodes sharing an auxiliary and a reference electrode.
Li-ion battery powered (DC charger adaptor also compatible), it can be easily connected to a PC via USB or through wireless connection. It is controlled by DropView 8400 software which allows plotting of the measurements, performing the analysis of results and powerful functions such as experimental control, graphs or file handling and one click export of results among others.

STAT8000P
Portable 8 channel potentiostat

Includes all the above specifications but only potentiostatic techniques are available.
µStat 8000P can be upgraded to a µStat 8000 with a galvanostat software update kit.

µStat 8000 and µStat 8000P	
Operating modes	8 x 1 channel potentiostat/galvanostat (only µStat 8000) 1 x 8 channel potentiostat
Number of channels	8
Potential range	± 4 V
Maximum current	± 80 mA
Current ranges	±1 nA to ±100 mA (9 ranges)
EC techniques	20 µStat 8000 (voltammetry, amperometry, galvanostat) 12 µStat 8000P (voltammetry, amperometry)
Computer interface	USB, wireless

STAT4000
Portable 4 channel potentiostat/galvanostat

µStat 4000 allows simultaneous electrochemical measurements (with the same or different techniques) in up to 4 channels that act totally independently; it also includes a multichannel mode, that acts as a potentiostat with up to 4 working electrodes sharing an auxiliary and a reference electrode.
Li-ion battery powered (DC charger adaptor also compatible), it can be easily connected to a PC via USB or through wireless connection. It is controlled by the software DropView 8400 which allows plotting of the measurements, performing the analysis of results and powerful functions such as experimental control, graphs or file handling and one click export of results among others.

STAT4000P
Portable 4 channel potentiostat

Includes all the above specifications but only potentiostatic techniques are available.
µStat 4000P can be upgraded to a µStat 4000 with a galvanostat software update kit.

µStat 4000 and µStat 4000P	
Operating modes	4 x 1 channel potentiostat/galvanostat (only µStat 4000) 1 x 4 channel potentiostat
Number of channels	4
Potential range	± 4 V
Maximum current	± 80 mA
Current ranges	±1 nA to ±100 mA (9 ranges)
EC techniques	20 µStat 4000 (voltammetry, amperometry, galvanostat) 12 µStat 4000P (voltammetry, amperometry)
Computer interface	USB, wireless

Hand-held potentiostats

- STAT-I-400
- STAT-I-400S
- STAT400
- STAT300

Find out all details about the instruments here

Portable affordable instruments useful to combine electrochemical (EC) research in the laboratory as well as on-site thanks to their portability and the possibility of working wireless

STAT-I-400

Portable bipotentiostat/galvanostat/MultiplEIS®

µStat-i 400 is a portable and wireless bipotentiostat /galvanostat/impedance analyzer with MultiplEIS® technology for dual channel multiplexed EIS measurements. It is controlled by DropView 8400 software, including EIS features such as data presentation of nyquist, bode, lissajous plots, with information about time domain, frequency domain as well as EIS data treatment: fit and simulation, semicircle fit and EIS analysis.

µStat-i 400 and µStat-i 400s	
Operating modes	Bipotentiostat, galvanostat, impedance, MultiplEIS® (only µStat-i 400)
Potential range	± 4V
Maximum current	± 40 mA
Current ranges	±1 nA to ±10 mA (8 ranges)
EIS frequency range	1 mHz to 1 MHz
EC techniques	25 µStat-i 400 (voltammetry, amperometry, MultiplEIS®, mixed techniques, galvanostat) 23 µStat-i 400s (voltammetry, amperometry, EIS, galvanostat)
Computer interface	USB, wireless

STAT-I-400S

Portable potentiostat/galvanostat/EIS

µStat-i 400s is a portable and wireless potentiostat/ galvanostat/impedance analyzer. It is controlled by DropView 8400 software, including EIS features such as data presentation of nyquist, bode, lissajous plots, with information about time domain, frequency domain as well as EIS data treatment: fit and simulation, semicircle fit and EIS analysis.

STAT400

Portable bipotentiostat/galvanostat

µStat 400 can be used with one or two-working electrodes configuration and can be applied for voltammetric, amperometric and potentiometric measurements, including 24 electroanalytical techniques. Li-ion battery powered (DC charger adaptor also compatible), it can be easily connected to a PC via USB or through wireless connection.

µStat 400	
Operating modes	Bipotentiostat, potentiostat, galvanostat
Potential range	± 4V
Maximum current	± 40 mA
Current ranges	±1 nA to ±10 mA (8 ranges)
EC techniques	24 (voltammetry, amperometry, galvanostat, mixed techniques)
Computer interface	USB, wireless

A special kit with dedicated accessories for organic and inorganic chemistry is also available **STAT400-OI**.

STAT300

Portable bipotentiostat

µStat 300 can be used with one- or two-working electrodes configuration and can be applied for voltammetric and amperometric measurements, including 9 electroanalytical techniques. Li-ion battery powered (DC charger adaptor also compatible), it can be easily connected to a PC via USB or through wireless connection.

µStat 300	
Operating modes	Bipotentiostat, potentiostat
Potential range	± 2V
Maximum current	± 3 mA
Current ranges	±1 nA to ±1 mA (7 ranges)
EC techniques	9 (voltammetry, amperometry)
Computer interface	USB, wireless

Stand-alone reader
DROPSTAT

DropStat is a customized reader configured attending to each researcher's needs, able to show in the LCD screen the concentration of the analyte for which an electrochemical sensor has been developed.
If needed, parameters can be later modified thanks to programming and calibration cards.

"We understand reachers and their needs"

Specifications are subject to change without previous notice

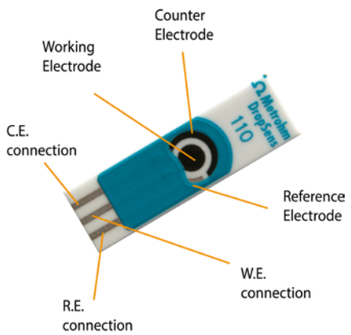
Electrodes

Screen-printed electrodes

Simplify your research with screen-printed electrodes (SPEs). With these small, inexpensive electrodes, you can perform *insitu*, decentralised experiments with low sample volumes. As these electrodes are designed for single use, you don't need to worry about maintenance procedures.

Key features

- Inexpensive single use sensors that eliminate electrode maintenance
- High reproducibility between electrodes
- Easy to use, small, and robust solution for *insitu* experiments
- Versatile and customizable: many configurations, sizes, and materials available
- Wide variety of WE materials: carbon, gold, platinum, silver, palladium, lead, tin, aluminum, antimony, transparent materials, modified with mediators, nanomaterials, biomaterials, oxides, particles...
- Ceramic, transparent or white plastic and FR4 substrates available



Find out all details about our SPEs here

110
Standard

C220AT
Work in solution

C013
WE of 1.6 mm

X1110
MultiAnalysis configuration – dual

8X550
MultiAnalysis configuration
8X electrochemical cells

TLFCL110
Integrated flow-cell

8W110
MultiAnalysis configuration
8WE sharing auxiliary and reference electrode

4W110
MultiAnalysis configuration 4WE sharing auxiliary and reference electrode

96X110
MultiAnalysis configuration - 96X electrochemical cells

G-IDECONPT10
Concentric design

PW-IDEAU100
Squared design

G-IDE222
With auxiliary and reference electrode

G-MEA555
Microelectrodes

AUFET30
Field effect transistor

PW-4XIDEAU40
Multi-interdigitated

"Dream of your sensor and together we will make it true"

Customized electrodes

If you are at an early stage of your research or you are developing a sensor for a final application thinking about reaching the market, we can be your experienced manufacturing partner.
Profit from our mass production capability and benefit from the multiple possibilities for customization: choose the substrate, place your logo, decide on the geometry and have as many material combinations as needed to suit your concrete design.

Interdigitated electrodes and mircroelectrodes

Interdigitated electrodes (IDEs) are ideal to perform impedance or conductivity measurements or if you are developing (bio)sensors.
These electrodes consist of two opposing metal-digit electrodes with a width and separation between 5 and 200 µm and we supply them over ceramic, plastic or glass in a variety of electrode materials.

Accessories

Batch cells

Batch cells suitable for immersing the electrode in solution, to allow the deposition of several mL of solution over the SPEs or even to have temperature control over your sample. Different models are available depending on the required working conditions and electrode of choice.

Batch injection analysis (BIA) cell
Robust tube-less FIA system for SPEs with injection volume electronically controlled.

Cell for screen-printed electrodes
Cell for batch analysis allowing optional stirring and standard additions.

Cell for screen-printed electrodes – Conical well
Methacrylate conic cell with an o-ring that allows to deposit volume covering the complete electrochemical cell.

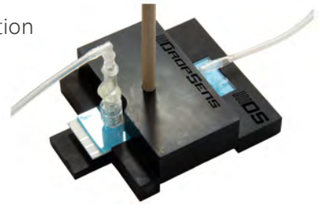
Spectroelectrochemical cells

Simplify your spectroelectrochemical set-up with optical cells to perform reflection or transmission experiments in batch or in flow with SPEs with an easy sensor replacement.
If you prefer to work with conventional electrodes, you also have available cells for performing Raman and transmission measurements.
Complete your set-up with the fibers, probes or cuvettes in our catalogue.

Cell for transmission experiments with screen-printed electrodes
Cell in teflon suitable to perform transmission experiments with transparent SPEs in combination with a collimator lens.

Raman cell for conventional electrodes
Suitable to be used in combination with RAMANPROBE and conventional Metrohm electrodes, its design allows an adjustable focal distance.

Spectroelectrochemical reflection cell for thin-layer flow-cell screen-printed electrodes
Cell for performing spectroelectrochemical measurements in flow conditions in combination with the TLFCL-CIR format screen-printed electrodes.



Flow-Cells

Wall-jet and thin layer flow-cells designed for different screen-printed electrodes formats and interdigitated electrodes. Suitable to be integrated in flow injection analysis (FIA) systems obtaining an inlet flow perpendicular to the electrode surface and an outlet flow at an angle of 45º or covering the substrate with a thin-layer.
Depending on the application and the electrode to use you may be able to choose between different models and complete your set-up with the available accessories for FIA.

Flow-cell for screen-printed electrodes
Methacrylate wall-jet flow-cell, with an open-close system with magnets (no screws needed) facilitating the sensors replacement. Other materials such as PEEK are available.

Flow-cell for magnetic assays with SPEs
Methacrylate flow-cell associated with a switchable magnet designed to perform FIA with magnetic beads.

Flow-cell for 8X format screen-printed electrodes
With a top part made of methacrylate, and a bottom part made of aluminum, this cell is suitable to perform flow injection analysis with 8X format SPEs.

Cables and connectors

Look for the suitable cable or connector depending on your electrode configuration, working conditions and instrument of choice.

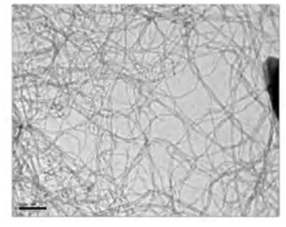
Cable for conventional electrodes and µStat-i instruments

Connector for SPEs and any kind of instrument

Connector for SPEs and µStat instruments

Nanomaterials and reagents

Carbon materials, nanoparticles, nanowires, quantum dots and enzyme substrates useful for electrode modification, catalysis, optical or biological labelling among others.



Visit www.metrohm-dropsens.com or the reference list (pages 17-19) to check all the available accessories.

Looking for a reference?

Here you can find all Metrohm Dropsens product references.

Do not hesitate to contact us at info.dropsens@metrohm.com if you have any questions.

Screen-printed electrodes

Working electrode made of carbon

110	Screen-printed carbon electrode
150	Screen-printed carbon electrode (Aux.: Pt; Ref.: Ag)
11L	Screen-printed carbon electrode (Aux.: C; Ref.: Ag/AgCl)
4W110	4 WEs screen-printed carbon electrode (1 Aux.: C; 1 Ref.: Ag)
8W110	8 WEs screen-printed carbon electrode (1 Aux.: C; 1 Ref.: Ag)
8X110	8X screen-printed carbon electrode
96X110	96X screen-printed carbon electrode
C110	Screen-printed carbon electrode / Work in solution
C110-NTC	Screen-printed carbon electrode / Work in solution / NTC sensor
C11L	Screen-printed carbon electrode (Aux.: C; Ref.: Ag/AgCl) / Work in solution
MH-110	Screen-printed carbon electrode with microholes
TLFCL110	Thin-layer flow-cell integrated screen-printed carbon electrode (Aux.: C ; Ref.: Ag)
TLFCL110-CIR	Thin-layer flow-cell integrated screen-printed circular carbon electrode (Aux.: C; Ref.: Ag)
TLFCL110S	Thin-layer flow-cell integrated screen-printed carbon electrode 2x1 mm (Aux.: C; Ref.: Ag)
TLFCL1110	Thin-layer flow-cell integrated dual screen-printed carbon electrode (Aux.: C; Ref.: Ag)
X1110	Dual screen-printed carbon electrode

Working electrode made of gold

220AT	Screen-printed gold electrode / Ink AT
220BT	Screen-printed gold electrode / Ink BT
250AT	Screen-printed gold electrode (Aux.: Pt Ref.: Ag) / Ink AT
250BT	Screen-printed gold electrode (Aux.: Pt; Ref.: Ag) / Ink BT
8X220AT	8X screen-printed gold electrode
96X220	96X screen-printed gold electrode
AUMIX	Mix of screen-printed gold electrodes 220AT, 220BT, C223AT and C223BT
C220AT	Screen-printed gold electrode / Work in solution/ Ink AT
C220BT	Screen-printed gold electrode / Work in solution / Ink BT
C223AT	Screen-printed gold electrode d 1.6 mm / Ink AT
C223BT	Screen-printed gold electrode d 1.6 mm / Ink BT
TLFCL210AT-CIR	Thin-layer flow-cell integrated screen-printed circular gold electrode (Aux.: C; Ref.: Ag) / Ink AT
TLFCL210BT-CIR	Thin-layer flow-cell integrated screen-printed circular gold electrode (Aux.: C; Ref.: Ag) / Ink BT
TLFCL2222AT	Thin-layer flow-cell gold screen-printed electrode / 4 electrodes design

Working electrode made of platinum

550	Screen-printed platinum electrode
550BT	Screen-printed platinum electrode / Ink BT
8X550	8X screen-printed platinum electrode
96X550	96X screen-printed platinum electrode
C550	Screen-printed platinum electrode / Work in solution
TLFCL510-CIR	Thin-layer flow-cell integrated screen-printed circular platinum electrode (Aux.: C; Ref.: Ag)

Working electrode made of silver

010	Screen-printed silver electrode (Aux.: C; Ref.: Ag)
C013	Screen-printed silver electrode (Aux.: C; Ref.: Ag) d 1.6 mm
TLFCL010-CIR	Thin-layer flow-cell integrated screen-printed circular silver electrode (Aux.: C; Ref.: Ag)

150

220BT

250AT

550

010

Transparent working electrode

AUTR10	Optically transparent gold electrode (Aux.: C; Ref.: Ag)
BIOFV1	Optically transparent PEDOT screen-printed electrode for biofuel cells
COTE10	Optically transparent carbon electrode (Aux.: C; Ref.: Ag)
ITO10	Optically transparent ITO screen-printed electrode (Aux.: C; Ref.: Ag)
OTEMIX	Mix of screen-printed optically transparent electrodes: ITO10, P10, AUTR10 and COTE10
P10	Optically transparent PEDOT screen-printed electrode (Aux.: C; Ref.: Ag)

Mediator modified working electrode

410	Screen-printed co-phthalocyanine / carbon electrode
610	Screen-printed meldola´s blue / carbon electrode
710	Screen-printed prussian blue / carbon electrode
110CUPH	Copper (II) phthalocyanine modified screen-printed carbon electrode
110FEPH	Iron (II) phthalocyanine modified screen-printed carbon electrode
110MNPH	Manganese(II) phthalocyanine modified screen-printed carbon electrode
F10	Screen-printed ferrocyanide / carbon electrode
MEDIATORSPES	Mix of screen-printed mediator / carbon electrodes 410, 610, 710 and F10

Nanomodified working electrode

110AGNP	Silver nanoparticles modified screen-printed carbon electrode
110CNF	Carbon nanofibres modified screen-printed carbon electrode
110CNF-GNP	Carbon nanofibres-gold nanoparticles modified screen-printed electrode
110CNT	Multi-walled carbon nanotubes modified screen-printed carbon electrode
110CNT-GNP	Multi-walled carbon nanotubes-gold nanoparticles modified screen-printed electrode
110GNP	Gold nanoparticles modified screen-printed carbon electrode
110GNP-STR	Streptavidin modified gold nanostructured screen-printed carbon electrode
110GPH	Graphene modified screen-printed carbon electrode
110GPH-GNP	Graphene-gold nanoparticles modified screen-printed carbon electrode
110GPHOX	Graphene oxide modified screen-printed carbon electrode
110MC	Mesoporous carbon modified screen-printed carbon electrode
110OMC	Ordered mesoporous carbon modified screen-printed carbon electrode
110RGPHOX	Reduced graphene oxide modified screen-printed carbon electrode
110SWCNT	Single-walled carbon nanotubes modified screen-printed carbon electrode

Biomodified working electrode

110STR	Streptavidin modified screen-printed carbon electrode
110XTR	Extravidin modified screen-printed carbon electrode
GLU10	Glucose sensor
GLU10HC	Wide linear range glucose sensor
LACT10	Lactate sensor
UA10	Uric acid sensor

Other working electrode materials

810	Screen-printed ruthenium oxide electrode
110ALI	Alizarin modified screen-printed carbon electrode
110AQ	Anthraquinone modified screen-printed carbon electrode
110AUP	Gold particles modified screen-printed carbon electrode
110BI	Bismuth oxide modified screen-printed carbon electrode
110CSQD	Core-shell quantum dots ZnS/CdSe modified screen-printed carbon electrode
110FERRI	Potassium ferricyanide modified screen-printed carbon electrode
110IRP	Iridium particles modified screen-printed carbon electrode
110NI	Nickel oxide modified screen-printed carbon Electrodes
110PANI	Polyaniline modified screen-printed carbon electrode
110PDP	Palladium particles modified screen-printed carbon electrode
110PHEN	Phenanthroline modified screen-printed carbon electrode
110PLYS	Poly-L-Lysine modified screen-printed carbon electrode
110PPYR	Polypyrrole modified screen-printed carbon electrode
110PTP	Platinum particles modified screen-printed carbon electrode

AUTR10


BIOFV1

410

110CNT


FS-BDD

Other working electrode materials

110QD	Core quantum dots CdSe modified screen-printed carbon electrode
110RHP	Rhodium particles modified screen-printed carbon electrode
110SFT	Surface treated screen-printed carbon electrode
AL10	Thick film aluminium electrode (Aux.: C; Ref.: Ag)
CR10	Thick film chromium electrode (Aux.: C; Ref.: Ag)
FS-BDD	Free standing boron doped diamond
MO10	Thick film molybdenum electrode (Aux.: C; Ref.: Ag)
PB10	Thick film lead electrode (Aux.: C; Ref.: Ag)
PW-PD10	Palladium electrode (Aux.: C; Ref.: Ag) / White plastic substrate
SB10	Thick film antimony electrode (Aux.: C; Ref.: Ag)
SN10	Thick film tin electrode (Aux.: C; Ref.: Ag)
SPESMIX	Mix of Screen-printed electrodes 110, 220AT, 220BT and 550
TA10	Thick film tantalum electrode (Aux.: C; Ref.: Ag)
W10	Thick film tungsten electrode (Aux.: C; Ref.: Ag)

*All materials could be offered in dual, 8X, 4W and 8W SPE formats

PW-PD10

Interdigitated and microelectrodes

Gold

G-IDE222	Interdigitated gold electrode (Aux.:Au; Ref.:Au) / 10 microns lines and gaps / Glass substrate
G-IDEAU10	Interdigitated gold electrode / 10 microns lines and gaps / Glass substrate
G-IDEAU5	Interdigitated gold electrode / 5 microns lines and gaps / Glass substrate
G-IDECONAU10	Interdigitated gold concentric design electrode / 10 microns lines and gaps / Glass substrate
G-MEA222	Gold MicroElectrode array d. 3mm / Microholes 10 microns / Glass substrate
G-MEAB222	Gold Band MicroElectrode array / 10 microns lines and 100 microns gaps / Glass substrate
IDEAU200	Interdigitated gold electrode / 200 microns lines and gaps
IDEAU200-HPT-WB	Interdigitated gold electrode / 200 microns lines and gaps / Pt heater
P-IDEAU100	Interdigitated gold electrode / 100 microns lines and gaps / Plastic transparent substrate
P-IDEAU50	Interdigitated gold electrode / 50 microns lines and gaps / Plastic transparent substrate
PW-4XIDEAU20	Multi-Interdigitated gold electrodes / 20 microns lines and gaps / Plastic substrate
PW-4XIDEAU30	Multi-Interdigitated gold electrodes / 30 microns lines and gaps / Plastic substrate
PW-4XIDEAU40	Multi-Interdigitated gold electrodes / 40 microns lines and gaps / Plastic substrate
PW-4XIDEAU50	Multi-Interdigitated gold electrodes / 50 microns lines and gaps / Plastic substrate
PW-4XIDEAU60	Multi-Interdigitated gold electrodes / 60 microns lines and gaps / Plastic substrate
PW-4XIDEAU70	Multi-Interdigitated gold electrodes / 70 microns lines and gaps / Plastic substrate
PW-IDEAU100	Interdigitated gold electrode / 100 microns lines and gaps / Plastic substrate
PW-IDEAU50	Interdigitated gold electrode / 50 microns lines and gaps / Plastic substrate

G-IDEAU5

Platinum

G-IDE555	Interdigitated platinum electrode (Aux.:Pt; Ref.:Pt) / 10 microns lines and gaps / Glass substrate
G-IDECONPT10	Interdigitated platinum concentric electrode / 10 microns lines and gaps / Glass substrate
G-IDEPT10	Interdigitated platinum electrode / 10 microns lines and gaps / Glass substrate
G-IDEPT5	Interdigitated platinum electrode / 5 microns lines and gaps / Glass substrate
G-MEA555	Platinum MicroElectrode array d. 3mm / Microholes 10 microns / Glass substrate
G-MEAB555	Platinum band MicroElectrode array / 10 microns lines and 100 microns gaps / Glass substrate

Other electrode materials

G-IDEAG5	Interdigitated silver electrode / 5 microns lines and gaps / Glass substrate
G-IDECU5	Interdigitated copper electrode / 5 microns lines and gaps / Glass substrate
G-IDEMIX	Mix of interdigitated electrodes G-IDEAU10, G-IDEAU5, G-IDEPT10, G-IDEPT5
P-IDEAG100	Interdigitated silver electrode / 100 microns lines and gaps / Plastic transparent substrate
P-IDEAG50	Interdigitated silver electrode / 50 microns lines and gaps / Plastic transparent substrate
P-IDEITO100	Interdigitated ITO electrode / 100 microns lines and gaps / Plastic transparent substrate
P-IDEITO50	Interdigitated ITO electrode / 50 microns lines and gaps / Plastic transparent substrate
PW-IDEPD100	Interdigitated palladium electrode / 100 microns lines and gaps / Plastic substrate
PW-IDEPD50	Interdigitated palladium electrode / 50 microns lines and gaps / Plastic substrate

IDEAU200-HPT-WB

G-IDE555

P-IDEITO100

Accessories

Batch cells for screen-printed electrodes

BIASPE02	Batch injection analysis cell for screen-printed electrodes (20-200 µL pipette)
BIASPE10	Batch injection analysis cell for screen-printed electrodes (100-1000 µL pipette)
CELL	Cell for screen-printed electrodes
CELL-IDE	Cell for interdigitated electrodes
CELL-IDE-PEEK	Cell for interdigitated electrodes in peek
CELL-PEEK	Cell for screen-printed electrodes in peek
CFLWCL-CONIC	Cell for screen printed-electrodes - Conical well
CFLWCL-CONIC-PEEK	Cell in PEEK for screen-printed electrodes - Conical well
SPECELL	Disposable well cell for screen-printed electrodes
SPECELL4W	Disposable well cell for 4W format screen-printed electrodes
SPECELL8W	Disposable well cell for 8W format screen-printed electrodes
SPECELL8X	Disposable well cell for 8X format screen-printed electrodes
TCELL	Thermostatic cell for screen-printed electrodes
TLCELL	Thin-layer cell for screen-printed electrodes

SPECELL4W

Flow-cells for screen-printed electrodes

CFLWCL-MAGN	Flow-cell for magnetic assays with screen-printed electrodes
CFLWCL-WE	Flow-cell for screen-printed electrodes - O-ring only for working electrode
CFLWCL-WE-PEEK	Flow-cell in peek for screen-printed electrodes - O-ring only for working electrode
FLWCL	Flow-cell for screen-printed electrodes
FLWCL8X	Flow-cell for format 8X screen-printed electrodes
FLWCL8X1C	Flow-cell for format 8X screen-printed electrodes 1 channel
FLWCL-IDE	Flow-cell for interdigitated electrodes (G-IDE without Aux. and Ref.)
FLWCL-IDE-TEF	Flow-cell in teflon for interdigitated electrodes (G-IDE without Aux. and Ref.)
FLWCL-P	Flow-cell in polypropylene for screen-printed electrodes
FLWCL-PEEK	Flow-cell in peek for screen-printed electrodes
FLWCL-SC	Flow-cell with screws for screen-printed electrodes
FLWCL-WS	Flow-cell for work in solution screen-printed electrodes
TLFCELL	Thin-layer flow cell for screen-printed electrodes
HPLCELL	HPLC cell for screen-printed electrodes

HPLCELL

Cell accessories

BIASTIR	Stirrer for BIASPE
CELLHOLDER	Holder for CELL
DTIPD1000	Tips for electronic micropipette P1000M (96 units)
DTIPD200	Tips for electronic micropipette P200M (96 units)
FIAEC	Complete FIA system for electrochemical detection with screen-printed electrodes
FLOWFITTINGS	Flow-fittings pack
PPUMP	Peristaltic pump
PVCTUBE	PVC tube for peristaltic pump – Several diameters
TLFCL-FLOWFITTING	Flow fitting pack for TLFCL SPEs (includes 2 male luers, 1 fitting and 30 cm of tubing)
TLFCL-HOLDER	Holder for Thin-layer flow-cell integrated screen-printed electrodes
TLFCL-INLINEPORT	In-line LUER injection port for TLFCL SPEs
TUBEB	PVC tube for peristaltic pump – 1,651 mm inner diameter
TUBEO	PVC tube for peristaltic pump – 0,889 mm inner diameter
TUBER	PVC tube for peristaltic pump – 1,143 mm inner diameter
TUBEY	PVC tube for peristaltic pump – 1,422 mm inner diameter
VALVE	Manual sample injection valve

FLWCL-SC

Spectroelectrochemical cells and optical accessories

CLENS	Collimator Lens
CUV	Cuvette Holder
FLKIT	Fluorescence kit
LEDRGB	LED light red green blue
FLKITSPE	Fluorescence kit

FIAEC

TFIBER

Spectroelectrochemical cells and optical accessories

LEDUV280	LED light-UV 280 nm
LEDVIS395	LED light-VIS 395 nm
PTGRID-TRANSCELL	Spectroelectrochemical cell with conventional electrodes
RAMANCELL	Raman cell for screen-printed electrodes
RAMANCELL-C	Raman cell for conventional electrodes
RAMANPROBE	Raman probe
REFLECELL	Reflection cell for screen-printed electrodes
REFLEPACK-VIS-UV	Pack for reflection experiments experiments with screen-printed electrodes
RPROBE-VIS-NIR	Reflection probe VIS-NIR
RPROBE-VIS-UV	Reflection probe VIS-UV
TFIBER-VIS-NIR	Transmission fiber VIS-NIR
TFIBER-VIS-UV	Transmission fiber VIS-UV
TLFCLRAMANCELL	Raman flow-cell for thin-layer flow-cell integrated screen-printed electrodes
TLFCL-REFLECELL	Reflection cell for thin-layer flow-cell integrated screen-printed electrodes
TRANSCELL	Transmission cell for transparent screen-printed electrodes
TRANSPACK-VIS-UV	Pack for transmission experiments with screen-printed electrodes

Cables and connectors for Metrohm DropSens instruments

4MMHCAST8	8 channel boxed connector for µStat-i MultiX
BICAST	µStat cable connector for dual screen-printed electrodes
BICASTDIR	µStat cable short connector for dual screen-printed electrodes
CABSTAT	µStat cable connector (2WE) for conventional electrodes
CABSTAT1	µStat 8000 / P and µStat 4000 / P for conventional electrodes
CABSTATMULTI	µStat 8000/P and µStat 4000/P one channel cable for conventional electrodes
CAST	µStat Cable connector for screen-printed electrodes
CAST1X8	µStat 8000 Cable connector for individual screen-printed electrodes
CAST8X	µStat 8000 Cable connector for 8X format screen-printed electrodes
CASTDIR	µStat Cable short connector for screen-printed electrodes
CAST-P	µStat Cable connector for plastic substrate screen-printed electrodes
CAST-TLFCL	µStat Cable connector for TLFCL format screen-printed electrodes
CDIOCABLEMULTI	DIO cable for µStat-i MultiX (requires CDIOINTERMULTI)
CDIOINTERMULTI	Interface for DIO cables of µStat-i MultiX
I-BICAST	µStat-i cable connector for dual screen-printed electrodes
I-CABSTAT	µStat-i cable connector for conventional electrodes (2WE)
I-CABSTAT1	µStat-i cable connector for conventional electrodes
I-CAST	µStat-i cable connector for screen-printed electrodes

Cales and connectors for any instrument

BICAC	Cable connector for dual screen-printed electrodes
BIDSC	Connector for dual screen-printed electrodes
BIDSC4MM	Connector with 4 mm for dual screen-printed electrodes
BIDSC-FET	Connector for AUFET30 electrodes
CAC	Cable connector for screen-printed electrodes
CAC4MMH	Cable connector with 4 mm banana connectors for screen-printed electrodes
CAC8X	Cable connector for 8X format screen-printed electrodes
CACIDE	Cable connector for glass substrate interdigitated electrodes
CACIDEMEA	Cable connector for for glass substrate interdigitated electrodes with Aux. and Ref.
CACIDE-P	Cable connector for plastic substrate interdigitated electrodes
CAC-NTC	Cable connector for C110-NTC screen-printed electrodes
CAC-P	Cable connector for plastic substrate screen-printed electrodes
CAC-TLFCL	Cable connector for thin-layer flow-cell electrodes
CONNECT4W	Connector for 4W format screen-printed electrodes
CONNECTOR96X-SYNC	Pack including CONNECTOR96X and SYNCONN96X
CONNECT8W	Connector for 8W format screen-printed electrodes
CONNECTOR96X	Connector for 96X format screen-printed electrodes
DSC	Connector for screen-printed electrodes

RAMANCELL

4MMHCAST8

CAST1X8

CAC

CONNECTOR96X

Cables and connectors for any instrument

DSC4MM	Connector with 4 mm for screen-printed electrodes
DSC-P	Connector for plastic substrate screen-printed electrodes

Other accessories

H-CELL	H-cell for hydrogen permeation experiments
MAGNET	Magnetic support for screen-printed electrodes
MAGNET8X	Magnetic support for format 8x screen-printed electrodes
MAGNET96X	Magnetic support for format 96x screen-printed electrodes
MAGNETOEC	MagnetoElectroChemistry support
MEMB	Membrane for screen-printed electrodes
PL1	Laboratory Practice – Ascorbic Acid in juice
PL2	Laboratory Practice – Uric Acid in urine
PL3	Laboratory Practice – Paracetamol in drugs
PL4	Laboratory Practice – Copper in tap water
PL5	Laboratory Practice – Glucose in drinks for babies and in honey
PL6	Laboratory Practice – L-lactic acid in wines
PL7	Laboratory Practice – Chloride in synthetic sweat
SYNCONN96X	Automatic controller for CONNECTOR96X
USBFLOATING	Galvanic isolation cable for µStat 300, µStat 400, µStat-i 400s and µStat ECL.
VKIT	Instruments verification kits for µStat 300 and µStat 400
VKITECL	Instruments verification kits for µStat ECL and SpectroECL
I-VKIT	Instruments verification kits for µStat-i 400 and µStat-i 400s
VKITMULTI	Instruments verification kits for µStat 4000P, µStat 4000, µStat 8000P and µStat 8000
VKITSPELEC	Instruments verification kits for SPELEC and SPELEC1050
VKITSPELECNIR	Instruments verification kit for SPELECNIR
VKITSPELECRAMAN	Instruments verification kit for SPELECRAMAN

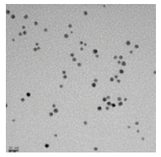
Nanomaterials and reagents

AGNW	Silver nanowires
AUNP-COL	Colloidal gold nanoparticles solution
AUNP-PUR	Purified gold nanoparticles solution
CNFSOL	Carbon nanofibres solution
CNTSOL	COOH functionalized multi-walled carbon nanotubes solution
CUNP-PUR	Purified copper nanoparticles solution
GPHOX	Graphene oxide
GPHOXSOL-AQU	Graphene oxide solution - Aqueous
GPHSOL	Graphene solution
GQD	Graphene quantum dots
HQDP	Hydroquinone diphosphate
IRNP-COL	Colloidal iridium nanoparticles solution
MCSOL	Mesoporous carbon solution
MWCNT	Multi-walled carbon nanotubes
NINW	Nickel nanowires
PAPP	p-AminoPhenyl phosphate
PDNP-COL	Colloidal palladium nanoparticles solution
PDNW	Palladium nanowires
PPAR	Phosphorilated paracetamol
PTNP-PUR	Purified platinum nanoparticles solution
PTNW	Platinum nanowires
QDCORE-550	CdSe core quantum dots 550 nm
QDCORESHELL-575-STR-AQU	CdSe/ZnS Core/Shell quantum Dots 575 nm modified with streptavidin-aqueous
QDCORESHELL-610	CdSe/ZnS Core/Shell quantum dots 610 nm
RHNP-COL	Colloidal rhodium nanoparticles solution

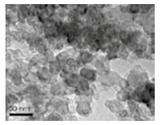
* Visit the "Nanomaterials and Reagents" section in www.metrohm-dropsens.com to check all the available nanomaterials and reagents

H-CELL

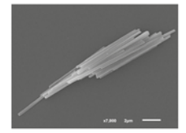
MAGNET



AUNP-COL



MCSOL



NINW

3 year
instrument warranty

Quality

Metrohm DropSens is a company certified in ISO 9001 and in ISO 13485 (for the 'manufacture of sensors for medical devices') Quality Management Systems

Further information

Please contact your Metrohm representative or Metrohm DropSens at sales.dropsens@metrohm.com

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Metrohm means … Spectroscopy!

Metrohm DropSens

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