Product Catalog

OrigaLys ElectroChem SAS
Made in know-How

**Instruments
for
Electrochemical analytical systems**

Origalys ElectroChem **12** *YEAR ANNIVERSARY*

Legacy from

**Tacussel
&
Radiometer
Analytical**

| **EXPERT in**
ELECTROCHEMISTRY, RDE
& mV/pH-METERS

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1 **ICONIC PRODUCT**
*REPRESENTING THE BRAND
FOR **11** YEARS*

BEST SELLERS

THE "COFFEE MACHINE" 😂 IS A
WELL-KNOWN SYMBOL OF ORIGALYS

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5 *YEAR
WARRANTY*

| **MADE IN FRANCE**

La Région
Auvergne-Rhône-Alpes

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1 **TEAM**
OF SPECIALISTS

DEDICATED TO HELP YOU BY
Phone
Live chat
Emails
Remote support

Customers

Many customers from various activity fields have trusted OrigaLys for the conception and manufacturing Electrochemical devices

Origalys
Electro chem

63 countries

40 year know-how

+500 customers

THEY TRUST US

Cedric Martinez

Maxime Valay

Origalys

Distributors
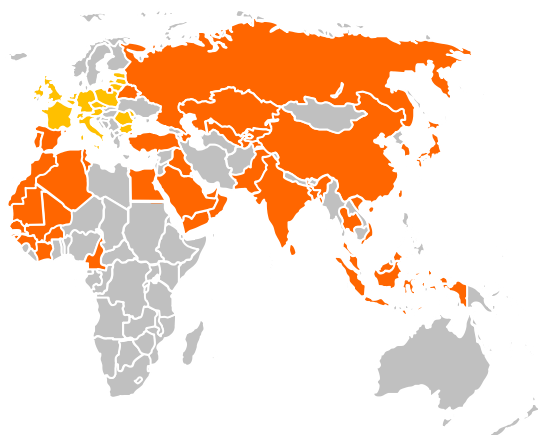
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Europe (16): Austria, Belarus, Bulgaria, Czech Republic, Estonia, Germany, Italy, Latvia, Lithuania, Moldava, Poland, Portugal, Romania, Russia, Spain and The United Kingdom.

Africa (13): Algeria, Burkina Faso, Cameroon, Côte d'Ivoire, Egypt, Gambia, Guinea, Guinea-Bissau, Mali, Mauritania, Morocco, Senegal and Tunisia.

Asia (27): Armenia, Azerbaijan, Bahrain, Bangladesh, China, India, Indonesia, Iraq, Japan, Kazakhstan, Kuwait, Kyrgyzstan, Malaysia, Oman, Pakistan, Qatar, South Korea, Sri Lanka, Taiwan, Tajikistan, Thaïlande, the Kingdom of Saudi Arabia, Turkey, the UAE, Uzbekistan, Vietnam and Yemen.

America (7): Argentina, Bolivia, Canada, Chile, Colombia, Mexico and the USA.

We are looking for distributors. Please, contact us directly

4

Origalys

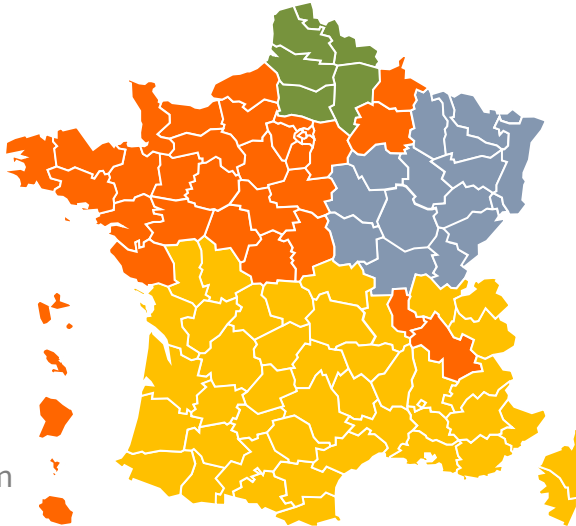**Maxime Valay**

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Web site: www.ctb-choffel.fr

Check who is your contact in France with your Zip Code on our web site www.origalys.com

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Contents

ORIGASTAT

SINGLE Potentiostat Galvanostat EIS
pH meter - T°C - RDE Speed Controller
- ✓ **100 mA**
- ✓ **2 A**

ORIGAFLEX

SINGLE & MULTI Potentiostat
Galvanostat & EIS (Optional)
Flexible and modular:
- ✓ **500 mA**
- ✓ **1 A**
- ✓ **5 A**
- ✓ **10 A**

ORIGALINE

Options for Potentiostats:
- ✓ **OrigaBoost – Current Booster**
- ✓ **OrigaMµ – Low current Probe**
- ✓ **OrigaTrod – RDE**
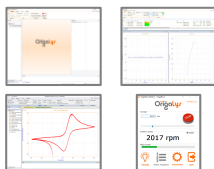
ORIGASOFT

- ✓ **OrigaMaster 5 – for Single Pot.**
- ✓ **OrigaViewer 2 – for Multi Pot.**
- ✓ **OrigaBox Interface – for RDE**

ORIGAMETER

Benchtop pH & Conductivity Meter
- ✓ **OpH218 & OCD218 Pack**
- ✓ **Combined & Non-combined Pack**

ORIGASER

Services provided by Origalys:
- ✓ **Radiometer's maintenance**
- ✓ **Training Day**
- ✓ **Customization**
- ✓ **Application notes**

The OrigaStat range

THE ALL IN ONE SYSTEM

OGS100

OGS100
With OrigaCell Kit

Standard functions

Potentiostat	Galvanostat

Impedancemeter EIS: 10µHz – 1kHz With OGFEIS: up to 5MHz

RDE Speed Controller	GND connector

T°C Probe *	pH meter *

Analog I/O and RS232 connectors to control external devices

* For **OGS100** and **OGS200** only

Standard functions

IT INCLUDES ALL THE STANDARD FUNCTIONS OF THE OGS100

+

Built-in Electrochemical cell: it includes 4 items (see below)

1

2

3

4

OGS080

Entry level of the OrigaStat Line

This Potentiostat, Galvanostat, Impedancemeter from **OrigaLys Electrochem SAS** was specially designed for Education and Research.

- Tutorials can be easily prepared in advance and protected by the plastic cover

- Complete solution: Potentiostat, Galvanostat, Impedancemeter (10 µHz - 1 KHz), RDE Speed Controller, PC Software

- Easily transportable

- Everything is adjustable or removable: the lighted cell and the beaker holder.

- A magnetic stirrer can also be added if needed

USB 2.0

Options

- **OrigaCell Kit**
Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base

- **OrigaMix**
Magnetic Stirrer

- **OrigaTrod**
Rotating Disk Electrode (RDE)

- **OrigaLine**
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.

- **OrigaTest**
Dummy cell

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±5 V
Compliance voltage	±17.5 V
Maximum current	±100 mA
Current ranges	±1 nA to ±100 mA in 9 decades
EIS capability	10 µHz to 1 KHz
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 30 fA)
Input impedance	1 TΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

PREPARATORY CLASSES FOR ELITE SCHOOL

" **B**ecause of the software intuitive programming "

Lycée du Parc, Lyon, France

I knew Origalys the first time because they fixed the Radiometer's instrument of the Ecole Normale Supérieure (ENS Lyon).
After analysing the OrigaLys website www.origalys.com, the OrigaStat OGS080 seemed the most suitable device for our teaching purposes, especially because of the software intuitive programming (flowchart). Indeed, it was one of the most important criteria to select OrigaLys instruments. Its evolutionary capacities, such as battery methods implementation, makes the OrigaStat the perfect instrument for preparatory classes for PC*. Thus, we would be able to have great and various methods for teaching.

Study of:

- ✓ **O**bservation of diffusion limited current
- ✓ **F**erri-Ferro electrochemical behavior
- ✓ **D**etection of Slow-Fast system
- ✓ **P**otential and Intensity curves
- ✓ **E**vans and Tafel curves
- ✓ **C**hronoamperometry

OGSI00

A Full Application

This Potentiostat, Galvanostat, Impedancemeter from **OrigaLys Electrochem SAS** was specially designed as a real all in one solution:

- Potentiostat, Galvanostat, Impedance-meter (10 µHz - 1 KHz), RDE Speed Controller, pH-meter and temperature measurement.

- Analog I/O and RS232 to control external devices as pump, burette, RDE, current booster and many more.

- Easily transportable

- Everything is adjustable or removable: the lighted cell and the beaker holder.

USB 2.0

Options

- **OrigaCell Kit**
Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base
- **OrigaMix**
Magnetic Stirrer
- **OrigaTrod**
Rotating Disk Electrode (RDE)
- **OrigaBoost**
Current Booster, from 5 A to 20 A
- **OrigaMµ**
Low Current Probe, down to 1 pA range
- **OGFEIS**
External EIS module: up to 5 MHz
- **OrigaLine**
Static Electrode, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **OrigaTest**
Dummy cell

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±5 V
Compliance voltage	±17.5 V
Maximum current	±100 mA
Current ranges	±1 nA to ±100 mA in 9 decades (1 pA to 10 nA with OrigaMµ)
EIS capability	10 µHz to 1 KHz
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 30 fA)
Input impedance	1 TΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

TEACHING OF PRACTICAL WORK
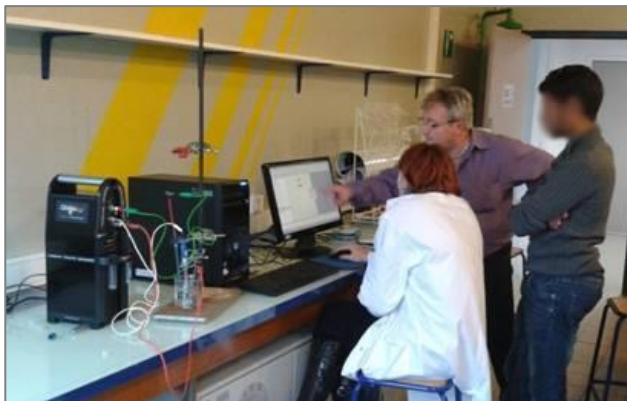
" **B**ecause it's designed and manufactured in France "

IUT Chemical Department, Besançon-Vesoul, France

" I trust the highly-qualified R&D team and received an efficient after-sales service. The link with Radiometer Analytical was also a good point, even if the OrigaLys instruments are more modern. The first criteria was the very competitive price, according the provided services. Then, its recent design shows a long-term investment but also easy to use. The students really like the nice shape and mainly its high technological performance.

The OGS100 perfectly fits the teaching of practical work, registered to the program of the IUT Chemical Department. The software is user friendly for the students.

The software is user friendly for the students. OrigaLys always listens to its customers' needs. The team is highly competent and reactive. The OGS100 is a complete instrument allowing us to perform our research. "

OGS200

High power

This Potentiostat, Galvanostat, Impedan-cemeter from **OrigaLys Electrochem SAS** was specially designed as a real all in one solution:

- Potentiostat, Galvanostat, Impedan-cemeter (10 µHz - 1 KHz), RDE Speed Controller, pH-meter and temperature measurement.

- Analog I/O and RS232 to control external devices as pump, burette, RDE, current booster and many more.

- Easily transportable

- Everything is adjustable or removable: the lighted cell and the beaker holder.

Options

- **OrigaCell Kit**
Orange Plastic cover, lighted and removable cell, beaker holder (with adjustable height) and removable base
- **OrigaMix**
Magnetic Stirrer
- **OrigaTrod**
Rotating Disk Electrode (RDE)
- **OrigaBoost**
Current Booster, from 5 A to 20 A
- **OrigaMµ**
Low Current Probe, down to 1 pA range
- **OGFEIS**
External EIS module: up to 5 MHz
- **OrigaLine**
Static Electrode, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **OrigaTest**
Dummy cell

USB 2.0

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±35 V
Maximum current	±2 A
Current ranges	±20 nA to ±2 A in 9 decades (1 pA to 10 nA with OrigaMµ)
EIS capability	10 µHz to 1 KHz
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 600 fA)
Input impedance	> 1 TΩ (//20 pF)
Potential bandwidth	1 MHz
Computer interface	USB 2.0
Software	OrigaMaster

ANTICORROSION COATINGS

" It brings us a huge capacity to realize measurement on research field "

Aéroprotec, expert in aeronautic coatings, Pau, France

We work on the anticorrosion coatings and we need to make measurements on characterizations and on production electrolyte research. By using this potentiostat, we develop the analysis method to anticipate the weak aspect of a process metal deposition.

This device can be monitored, thus we can easily control the experiment conditions. It brings us a huge capacity to realize measurement on research field, and mainly on the process itself. The results are very relevant.

The instrument is also useful to analyze metals in aqueous solution. It is a good environment advantage.

The OrigaStat range

1 **OGS080 – Perfect for Teaching / Education**

Maximum Current: ±100 mA
Current ranges: ±1 nA to ±100 mA
Max. Applied Potential: ±5 V

Easily transportable
Glass free

2 **OGS100 – Perfect for Research**

BEST SELLERS

Maximum Current: ±100 mA
Current ranges: ±1 nA to ±100 mA
Max. Applied Potential: ±5 V

Connect and control external devices
Polyvalent

3 **OGS200 – Perfect for Surface Treatment**

Maximum Current: ±2 A
Current ranges: ±20 nA to ±2 A
Max. Applied Potential: ±15 V

Connect and control external devices
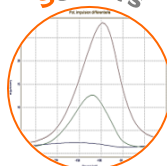Polyvalent

MAIN APPLICATIONS WITH ORIGASTAT

Teaching   Coatings   Corrosion   Sensors   Conservation

Detailed specifications

	OrigaStat		
	OGS080	**OGS100**	**OGS200**
Potentiostat	yes		
Galvanostat	yes		
Impedancemeter	yes		
Maximum current	±100 mA		±2 A
Compliance voltage	±17.5 V		±35 V
Max applied potential	±5 V		±15 V
Voltage ranges	±1 V, ±2 V and ±5 V		±3 V, ±6 V and ±15 V
Potential accuracy	< 0.1% FSR*		
Potential resolution	30 µV		91 µV
Maximum scan rate	200 V/s		
Current ranges	9	9 (12 with low current option)	9 (14 with low current option)
with standard board	±1 nA to ±100 mA		±20 nA to ±2 A
with low current option	Not available	1 pA to 10 nA	
Current accuracy	< 0.1% FSR		
Current resolution	0.003 % FSR (Best resolution: 30 fA)		0.003 % FSR (600 fA)
Potentiostat rise/fall time	< 2 µs		
Input Impedance	>1 TΩ (//20 pF)		
Interfaces	USB 2.0		
Acquisition time	≥100 µs		
IR compensation	Manual and automatic feedback Manual and automatic static		
Electrodes connections	2, 3, 4		
A/D converter	16 bits		
EIS capability	10 µHz to 1 KHz. Up to 5 MHz if connected to the OGFEIS		
Analog I/O	Not available	Yes, 1	
External current booster	Not available	From 5 A to 20 A	
Floating option	No, versatile connectivity		
Filters	1 µs to 1 s, analog		
Dimensions (DxWxH) Dimensions (unfolded feet)	326 x 135 x 418 mm 326 x 247 x 418 mm		400 x 135 x 418 mm 400 x 247 x 418 mm
Power requirements	90-264Vac, 47-63Hz, 30VA		90-264Vac, 47-63Hz, 120VA
Weight	5.5 kg		8 kg
PC Software	OrigaMaster (by USB 2.0)		
Cell cable length	On demand		
Temperature control	Not available	-10°C to 105°C (14°F to 221°F)	

*FSR = Full Scale Range

**Subject to change without notice**

The OrigaFlex range

Perfect for the Battery Analysis

- ✓ System of « **independant module** »
- ✓ Combination of modules (or channels) from different powers: 500 mA, 1 A, 5 A and 10 A
- ✓ Each module is a true **Potentiostat** and **Galvanostat**
- ✓ Impedance module (OGFEIS) in option
- ✓ Connector for Battery Holders and T°C

OGF500
±500 mA / ±20 V

BEST SELLERS

OGF01A
±1 A / ±20 V

EXAMPLE OF SET-UP: 5 CHANNELS

> 1 x **OGFDRV**
> 5 x **OGF500**
> 1 x **OGFEIS**
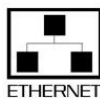
ETHERNET

OGF05A
±5 A / ±20 V

MAIN APPLICATIONS

Batteries   **C**orrosion   **S**ensors   **F**uel cells

OGF10A
±10 A / ±20 V
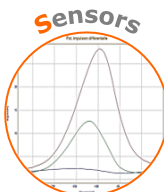
How it works

To supply the system, there are two possibilities, depending on your needs...

OGFDRV – DRIVE UNIT – MULTI-CHANNEL CONFIGURATION

- ✓ **Power supply**
- ✓ **Control of channels**
- ✓ **Built-in dummy cell**

ETHERNET

Use an "**OGFDRV - Drive Unit**", from one channel and to extend it in the future.

For instance:

5 channels 500 mA (OGF500)
+
One EIS module

OGFPWR – POWER SUPPLY – FOR SINGLE-CHANNEL

- ✓ **Power supply**
- ✓ **For only one channel**
- ✓ **And one OGFEIS**

USB 2.0

or

Consult our different Pack OGF:

Pack OGF500   Pack OGF01A   Pack OGF05A   Pack OGF10A

For instance:

One channel 500 mA
+
One EIS module

or

One channel 500 mA
=
Pack OGF500

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The concept

From a single to a multi and flexible configuration...
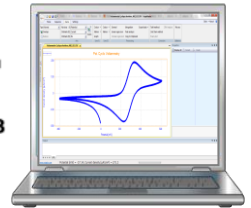
1 **S**ingle Potentiostat for low budget

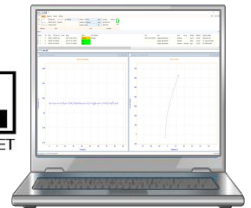**or**

with or without EIS

Thanks to the Power Supply

USB

OrigaMaster

2 **M**ulti-Potentiostats

Thanks to the Drive Unit

ETHERNET

OrigaViewer

3 **S**plit multi-Potentiostats

and

Thanks to the Power Supply

ETHERNET

USB 2.0

The concept

Thanks to a networking system, the possibilities are without limits...

4 **N**o limit multi-Potentiostats

Thanks to an Ethernet Switch.

You can connect all the Drive Units to your Switch

ETHERNET

Origa**Viewer**
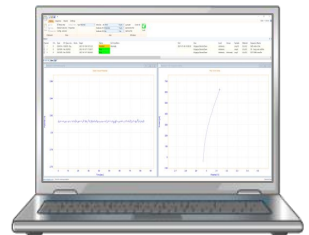
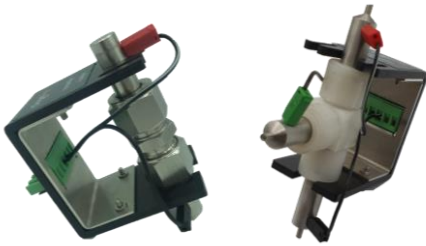**B**y multiplying the Drive Units, you connect as many Channels as you need.

....

Either 1 Drive Unit, 2, 3 or more

Example: 9 channels and 2 EIS

Origa**Flex**, from 1 to 999 channels

Origaline

Battery **H**olders for OrigaFlex

Swagelok Holders
2 electrodes / 3 electrodes

Coin cell Holder
CR2032

Dimensions:

✓ Length: 80 mm
✓ Width: 42 mm
✓ Height: 65 mm

Fitting the following batteries:

✓ Thickness: 3,2 mm maximum
✓ Diameter: 20 mm maximum

Main Specifications:
✓ Easily removable from the device
✓ Empty weight: 44,51 g
✓ Full weight: 200 g
✓ Banana connectors: ø2 mm
✓ Operating temperature:
　　　　-30°C à 80°C

Main Specifications:
✓ Easily removable from the device
✓ Length: 80 mm
✓ Width: 32 mm
✓ Temperature sensor
✓ Operating temperature:
　　　　-30°C to 80°C

Other Battery Cell Holders:
On demand

Adding a voltage measurement in your cell

NEW

OrigaDiff

Differential inputs
⚠ Max ±20V

Differential Amplifier

Made by
OrigaLys

CE

IN / OUT
Power
Analog
12V$_{DC}$ /1A

Reference: AR01556CIAL

Fitting OrigaFlex with its Holder

Ideal solution for battery field

CONCEPT:
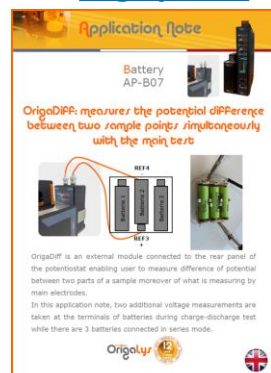Add a high input impedance voltage measurement at any point in your cell.

Batteries

✓ Connectors: BNC
✓ Max voltage: ±20V
✓ Real time monitoring
✓ Available in OM5 & OV2

✓ Compatible with:
  ✓ OrigaFlex range
  ✓ OGS100 & OGS200

See the Application Note: AP-B07

on origalys.com

Application Note

Battery
AP-B07

OrigaDiff measures the potential difference between two sample points simultaneously with the main test

REF4

REF3

OrigaDiff is an external module connected to the rear panel of the potentiostat enabling user to measure difference of potential between two parts of a sample moreover of what is measuring by main electrodes.
In this application note, two additional voltage measurements are taken at the terminals of batteries during charge-discharge test while there are 3 batteries connected in series mode.

OrigaLys

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OGFEIS

High **E**lectrochemical **I**mpedance **S**pectroscopy (EIS)

Performing EIS measurements becomes easier with this additional module dedicated to Impedance.

- Once the module is added to any kind of Channel, the **OrigaMaster** software allows a potentiostatic and galvanostatic control, over a frequency of:

    10 µHz to 5 MHz

- Included into OrigaMaster and OrigaViewer, you can find all the EIS methods:
    - Potential Dynamic EIS
    - Potential Fixed Frequency (Capacitance): Mott-Schottky
    - Potential Fixed Frequency versus Time (HFR)
    - Galvanic Fixed Frequency versus Time (HFR)
    - Galvanic Dynamic EIS

Compatibility

OrigaFlex	OrigaStat
✓ **OGF500**	✓ **OGS100**
✓ **OGF01A**	✓ **OGS200**
✓ **OGF05A**	
✓ **OGF10A**	

OGFEIS with OrigaFlex

OGFEIS with OrigaStat

Main Technical Specifications

Frequency range	10 µHz – 5 MHz
Frequency resolution	5 ppm
Input range	±15 V
Signal types	Sine with delay and Average on 1 to 10 determinations
Input Channels	E and I from the Potentiostat/galvanostat or X and Y external signals
Potential AC Amplitude	6µV to 7,5V maximum
Current AC Amplitude	100% of range I, best resolution 6ppm
Data	Nyquist, Bode, Admittance, Mott-Schottky
Analysis	Fit and simulation, Find circle, Element subtraction, Export Data
Software	OrigaMaster and OrigaViewer

OGF500

500 mA CHANNEL

- ✓ Simultaneous measurements on different Channels at the same time can be synchronized.

- ✓ EIS optional with OGFEIS module.

- ✓ Can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.

- ✓ See the Status or the free potential on the bottom screen

- ✓ Up to 10 Channels **OGF500** with 1 **Drive Unit & Dummy Cell**

Options

- • **OGFEIS**
External EIS module: 10µHz-5MHz
- • **OrigaTrod Kit**
Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)
- • **OrigaMµ**
Low Current Probe, down to 1 pA range
- • **OrigaMix**
Magnetic Stirrer and its Speed Controller (**OrigaBox**)
- • **OrigaLine**
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- • **Battery Cell Holder**
See picture below

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±500 mA
Current ranges	±5 nA to ±500 mA in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	0.003 %
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 150 fA)
Potential bandwidth	1 MHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster

QUANTIFICATION OF CORROSION

" **We** strongly recommend OrigaLys equipment for the electrochemical measurement of corrosion "

Bic® Ecriture, writing systems, Marne-La-Vallée, France

66 We chose to work with ORIGALYS© because this company is close to our values with Made In France equipment; devices are designed and manufactured in France. Pricing was also a criterion of choice regarding equipment' accuracy, robustness and reliability.

In addition, Origalys has offered us the services of its engineering office to propose us a custom solution, that perfectly fit our needs.

The machines are very easy to use with a "user-friendly" software. Programable methods, graphics and different data export solutions facilitate measurement and result interpretation. The instrument is also useful to analyze metals in aqueous solution. It is a good environment advantage.

The technical support of ORIGALYS© has contributed to the success of internal projects by being pro-active, fast and effective. **99**

1 A CHANNEL

✓ Simultaneous measurements on different Channels at the same time can be synchronized.

✓ EIS optional with OGFEIS module.

✓ Can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.

✓ See the Status or the free potential on the bottom screen

✓ Up to 10 Channels **OGF01A** with 1 **Drive Unit & Dummy Cell**

Options

• **OGFEIS**
External EIS module: 10µHz-5MHz
• **OrigaTrod Kit**
Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)
• **OrigaMµ**
Low Current Probe, down to 1 pA range
• **OrigaMix**
Magnetic Stirrer and its Speed Controller (**OrigaBox**)
• **OrigaLine**
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
• **Battery Cell Holder**
See picture below

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±1 A
Current ranges	±10 nA to ±1 A in 9 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	0.003 %
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 300 fA)
Potential bandwidth	1 MHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster

ANTICORROSION QUALITY CONTROL
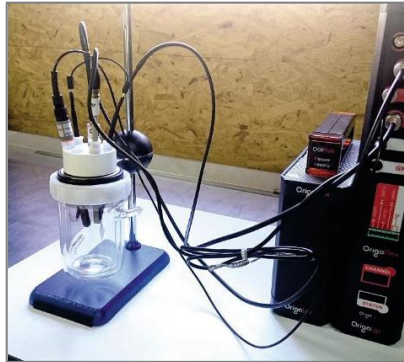
"Those who want to integrate ways of in-house test can contact Origalys"

AMF, manufacturer of medical implants, Lury sur Arnon, France

A corrosion test is very delicate to realize for several reasons. It is necessary to know how to interpret the curves of corrosion and understand the phenomena. It is necessary to give to the laboratory series of implants with several qualities of state of surface and several thicknesses of passivation layer. It is only with such a level of trial report that we can hope to win the trust of an auditor of CE or FDA marking.

Compliance with the standard ASTM F2129

OGFO5A

5 A CHANNEL

✓ Simultaneous measurements on different Channels at the same time can be synchronized.

✓ EIS optional with OGFEIS module.

✓ Can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.

✓ See the Status or the free potential on the bottom screen

✓ Up to 4 Channels **OGF05A** with 1 **Drive Unit & Dummy Cell**

Options

- **OGFEIS**
External EIS module: 10µHz-5MHz
- **OrigaTrod Kit**
Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)
- **OrigaMµ**
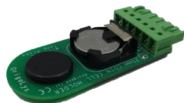Low Current Probe, down to 1 pA range
- **OrigaMix**
Magnetic Stirrer and its Speed Controller (**OrigaBox**)
- **OrigaLine**
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **Battery Cell Holder**
See picture below

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±5 A
Current ranges	±50 µA to ±5 A in 6 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	0.003 %
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 1.5 nA)
Potential bandwidth	100 KHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster

DEVELOPMENT OF NEW ELECTROCALYSTS

" We strongly recommend this system for the electrochemical measurement "

Institute of Electrochemistry, University of Alicante, Spain

❝ OrigaFlex (OGF05A) is an excellent option to perform electrocatalytic measurements related to water electrolysis. The system is very easy to use, and the software offers multiple and interesting options. On the other hand, the technical support of ORIGALYS© is always accessible and effective. We strongly recommend this system for the electrochemical measurements dealing with water electrolysis. ❞

10 A CHANNEL

✓ Simultaneous measurements on different Channels at the same time can be synchronized.

✓ EIS optional with OGFEIS module.

✓ Can be addressed directly to a PC, via USB and so controlled by **OrigaMaster**.

✓ See the Status or the free potential on the bottom screen

✓ Up to 10 Channels **OGF10A** with 1 **Drive Unit & Dummy Cell**

Options

- **OGFEIS**
External EIS module: 10µHz-5MHz
- **OrigaTrod Kit**
Rotating Disk Electrode (RDE) and its Speed Controller (**OrigaBox**)
- **OrigaMµ**
Low Current Probe, down to 1 pA range
- **OrigaMix**
Magnetic Stirrer and its Speed Controller (**OrigaBox**)
- **OrigaLine**
Static Electrodes, Glass Electrodes, Tips, Sample Holder, ElectroChemical Cell, and so on.
- **Battery Cell Holder**
See picture below

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±10 A
Current ranges	±100 µA to ±10 A in 6 decades
Potential accuracy	< 0.1 % FSR (Full Scale Range)
Potential resolution	0.003 %
Current accuracy	< 0.1 % FSR
Current resolution	0.003 % FSR (Best: 3 nA)
Potential bandwidth	100 KHz
Computer interface	Ethernet or USB 2.0
Software	OrigaViewer or OrigaMaster

Bi-Potentiostats

| DRV Unit | WRK 1 | WRK 2 | AUX REF |

✓ **M**onitor by Ethernet

✓ **R**RDE compatible

✓ **T**hree true Potentiostats

✓ **O**rigaFlex channels are combinable: from 500mA, 1A, 5A to 10A

Origa**Viewer**

ETHERNET
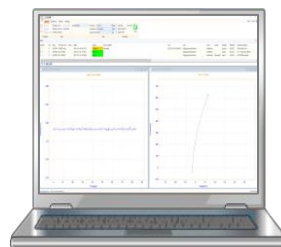
Ideal for RRDE analysis

CONCEPT:

In bi-potentiostat mode, we monitor three power electrodes: two working electrodes (WRK 1 & WRK 2) and one counter electrode (AUX).

See the Application Note:

AP-GE14
on **origalys.com**

Optimal configuration

Current Work **1** + Work **2** < Current Aux/Ref
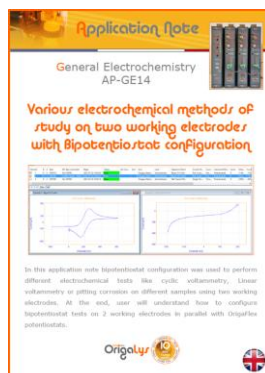
ELECTROCATALYSIS AND BATTERY RESEARCH
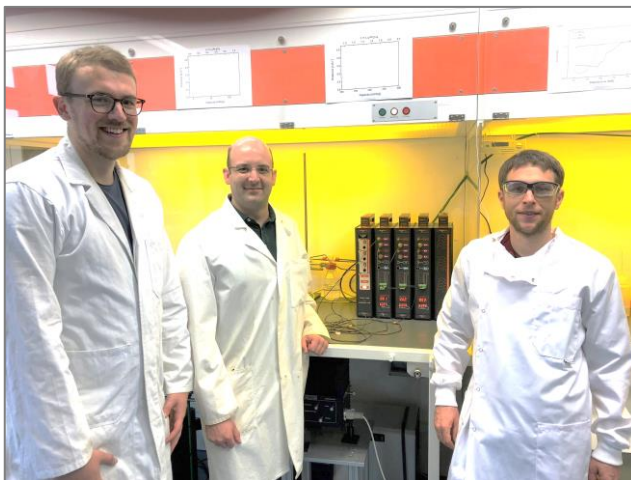
" The Origaflex offers great value for a flexible system "

Georg-August-Universität Göttingen
IMP Institut für Materialphysik

It performs flawless during standard measurements such as rotating-ring disk measurements of nanoparticles or charge discharge curves of battery materials. We have used it, e.g., in our recent publication in ChemSusChem.

The system is simple and easy to use. Most importantly, my students like to work with the potentiostat as well as with the software OrigaMaster and OrigaViewer. The software is very intuitive and allows drawing complex experimental protocols using the most common electrochemical methods.

The graphical representation of the experimental protocol makes it also easy to document the performed experiment. Overall, the OrigaFlex system offers great value for a flexible and accessible potentiostat system at a low price.

	OrigaFlex			
	OGF500	**OGF01A**	**OGF05A**	**OGF10A**
Potentiostat	yes			
Galvanostat	yes			
Maximum current	±500 mA	±1 A	±5 A	±10 A
Compliance voltage	±20 V			
Max applied potential	±15 V			
Voltage range	±15 V			
Potential accuracy	< 0.1% FSR (full scale range)			
Potential resolution	0.003 %			
Maximum scan rate	200 V/s			
Current ranges	9 (14 with low current option)	9 (13 with low current option)	6 (11 with low current option)	6 (11 with low current option)
with standard board	±5 nA to ±500 mA	±10 nA to ±1 A	±50 µA to ±5 A	±100 µA to ±10 A
with low current option	1 pA to 10 nA			
Current accuracy	< 0.1% FSR			
Current resolution	0.003 % FSR (Best: 150 fA)	0.003 % FSR (Best: 300 fA)	0.003 % FSR (Best: 1,5 nA)	0.003 % FSR (Best: 3 nA)
Input impedance	1 TΩ (//20 pF)			
Interfaces	Ethernet, USB 2.0			
Acquisition time	$\geq$100 µs			
IR Compensation	Yes, manual and automatic Static			
Electrode connections	2, 3, 4			
A/D converter	16 bits			
EIS Capability	10 µHz to 5 MHz			
Analog I/O	Yes, 1			
Floating option	No versatile connection			
Filters	1 µs to 1 s, analog			
Dimensions (DxWxH)	300 x 85 x 450 mm		300 x 120 x 450 mm	300 x 170 x 450 mm
Power requirements	88-264 Vac, 47-63 Hz, 30 VA	88-264 Vac, 47-63 Hz, 40 VA	115/230 Vac, 47-63 Hz, 150 VA	115/230 Vac, 47-63 Hz, 150 VA
Weight	4.55 kg	4.55 kg	8 kg	16 kg
PC Software	OrigaMaster (by USB 2.0) and OrigaViewer (by Ethernet)			
Cable length	On demand			
Temperature control	-10°C to 105°C (14°F to 221°F)			

Subject to change without notice

Powerful

If you need higher current ranges, you can easily add our booster, OrigaBoost. The **OrigaBoost** increases the maximum current of the following instruments:

• **OrigaStat: OGS100** and **OGS200**

The maximum current can be increased easily by adding a module of 5 A. Thus, 4 ranges are available:

5 A, 10 A, 15 A and 20 A.

How it works?

The Booster consists in connecting **1 Drive Unit** and **Power Units of 5 A to an OrigaLys' potentiostat**

The **Drive Unit** replaces the front panel of the **OrigaLys'** Potentiostat. Thus, you connect the electrodes to the **Drive Unit** and not anymore to the potentiostat.

Main Technical Specifications

Electrode connections	2, 3 and 4
Max applied potential	±15 V
Compliance voltage	±20 V
Maximum current	±5 A / ±10 A ±15 A / ±20 A
Resolution	0.003%
Accuracy	< 0.1 % FSR (Full Scale Range)
Operation mode	Potentiostat/ Galvanostat
Bandwidth - Potentiostatic - Galvanostatic	50 KHz
Software	OrigaMaster
Instrument compatibility	OGS100 OGS200 OGFEIS

The most sensitive Low Current Potentiostat

The **OrigaMµ** allows to perform very low current measurement of the following instruments:

- **OrigaStat: OGS100** and **OGS200**
- **OrigaFlex: OGF500, OGF01A, OGF05A and OGF10A**

The current range can be decreased to:
1 pA, 10 pA, 100 pA, 1 nA and **10 nA.**

How it works?

This low current potentiostatic probe can be used alone (manual mode) or connected (remote mode) to an **OrigaLys**' instrument.

Remote Mode

Connecting the **OrigaMµ** to an **OrigaLys**' potentiostat allows to fully operate the excellent response time of the **OrigaMµ.**

Driven by purely analog signal and supplied on battery during measurements (no risk of interference), you can implement using **OrigaMaster** all standard electrochemical methods including impedance up to 1 KHz (for **OrigaStat** only).

Manual Mode

The **OrigaMµ** can be used alone, thus it applies a constant potential (from ±1 V).
Here, the current ranges are:
±100 pA, ±1 nA and ±10 nA.

Main Technical Specifications

Electrode connections	2 or 3
Max applied potential	±2 V (Remote mode) ±1 V (Manual mode)
Compliance voltage	±7 V
Current ranges Remote mode: 5 Manual mode: 3	±1 pA, ±10 pA, ±100 pA , ±1 nA and ±10 nA ±100 pA , ±1 nA and ±10 nA
Best resolution	30 aA
Accuracy	< 0.1 % FSR (Full Scale Range)
Use	Connected or alone
Software	OrigaMaster if connected None if alone
Instrument compatibility	OGS100 and OGS200 OGF500, OGF01A, OGF05A and OGF10A

Rotating Disk Electrode (RDE)

Radiometer's EDI101 and CTV101 Legacy (same designer)

Fully compatible with tips from Radiometer

OrigaTrod

✓ RDE

✓ 100 to 10,000 rpm

✓ Accuracy: 0.35%

OrigaBox

✓ Speed Controller

✓ With PC Software

✓ Resolution: 0.35%

OPTION: OrigaSwitch - Remote control footswitch

NEW

✓ Start & Stop the RDE with foot

✓ Handle your experiment safely

✓ For OrigaStat & OrigaBox

✓ Perfect for Glovebox

35

OrigaBox

RDE Speed Controller

- ✓ **I**t controls the RDE speed rotation
- ✓ **U**SB or analog consign, or RS232 control
- ✓ **C**an be used alone or connected to a potentiostat

12 cm

14,2 cm

By using a Potentiostat from:

OrigaLys

Other brands

1st solution = MANUAL CONTROL

Thanks to the software from OrigaLys: OrigaBox Interface. Connected with USB.

0 rpm

2017 rpm

2nd solution = AUTOMATIC CONTROL

The Speed Rotation is controlled by Origa**Master**: the software which controlled the Potentiostat.

The Speed Rotation is controlled by the software which controlled the Potentiostat.

An analog signal or RS232 is required from the Potentiostat, consult us

An easy solution

Rotating Disk Electrode with a built-in Speed Controller

✓ Suitable to any kind of brands: Metrohm-Autolab, Bio-Logic, CH Instruments, and so on

✓ Compatible with tips from Radiometer-Hach

✓ From 100 to 5,000 rpm

Potentiometer

Monitoring manually the rotation speed of the OrigaTrod and directly on the device.

External Power Supply

The system needs to be directly supplied by a standard AC / DC switching adaptor 12V output.

Sample Holders

Pellets from OrigaLys can be used with a **Sample Holder,** which can be adapted on the **RDE** (OrigaTrod). The material is **PEEK** (PolyEther Ether Ketone).

Product No.	Ø8 mm: E11OGL001CIAL Ø15 mm: E11OGL006CIAL
Temperature range	-10 to 105°C
Length	17 mm
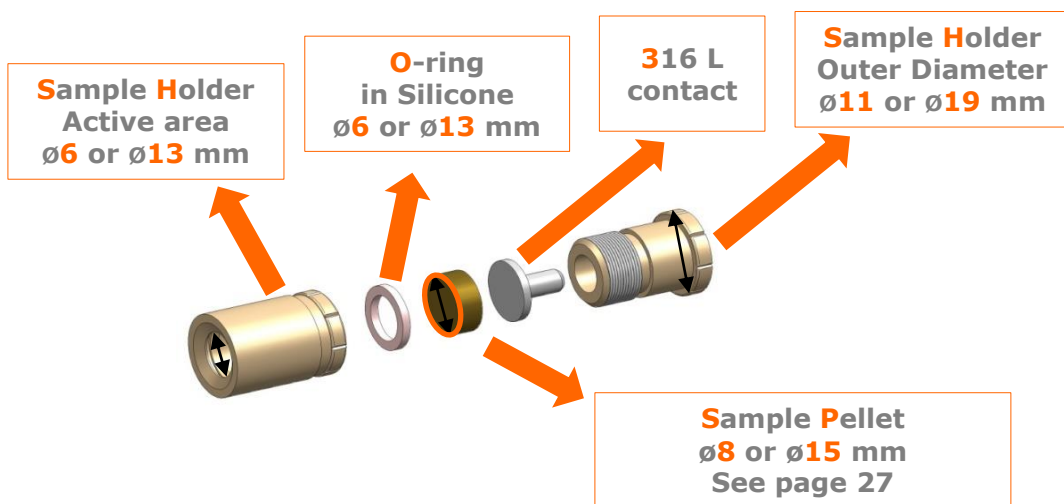
**Sample Holder
Active area
ø6 or ø13 mm**

**O-ring
in Silicone
ø6 or ø13 mm**

**316 L
contact**

**Sample Holder
Outer Diameter
ø11 or ø19 mm**

**Sample Pellet
ø8 or ø15 mm
See page 27**

TO BE USED WITH RDE AND STATIC ELECTRODE

OrigaTrod
OrigaLys' RDE

EDI101
Radiometer's RDE

OrigaTrod Lt
RDE with potentiometer

Pellets

To be inserted in the Sample-Holder, **OrigaLys** provides a whole range of sample pellets.

Thickness	BDD: 1 mm Other pellets: 3 mm
Diameter	8 or 15 mm

AVAILABLE PELLETS: Ø8 or 15 mm

Material	Diameter (mm)
316L Stainless	8 and 15
A37	8
Aluminium	8
Boron Doped Diamond (BDD)	8 and 15
Carbon Steel XC38	8
Copper	8 and 15
Glassy Carbon	8 and 15
Gold	8
Graphite	8
Iron	8
Nickel	8 and 15
Platinum	8
Silver	8
Stainless Steel	8
Tungsten	8

316 L
Ø15 mm

BDD
Ø8 mm

Tips

Tips from **OrigaLys** can be used with our **RDE** (OrigaTrod) and with the **Static Electrode** (StaTrod) but also with most of other RDE on the market.

Length	20 mm
Material	PEEK

For instance:
Glassy Carbon
Ø3 mm

AVAILABLE TIPS: Ø1, 2, 3 or 5 mm

Material	Diameter (mm)	Material	Diameter (mm)
316L Stainless	2 and 5	Iron	5
70% Copper and 30% Nickel	5	Nickel	2 and 5
Aluminium	5	Palladium	2
Antimony	5	Peek	0
Cadmium	5	Platinum	2 and 5
Carbon Steel XC38	5	Rhodium	2
Cobalt	5	Silver	2 and 5
Copper	5	Tin	5
Glassy Carbon	3 and 5	Titanium	5
Gold	2 and 5	Tungsten	1
Iridium	5	Zinc	1

TO BE USED WITH RDE AND STATIC ELECTRODE

OrigaTrod
OrigaLys' RDE

EDI101
Radiometer's RDE

OrigaTrod Lt
RDE with potentiometer

OrigaTrod Kit

A complete solution
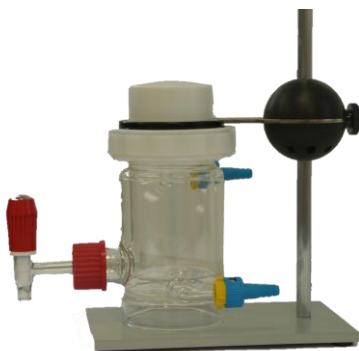
Reference: AR00484CIAL

It's fully compatible with the tips from Radiometer.

RDE Stand

This stand for RDE is composed by:
- A standard stand
With a robust base
The height is easily adjustable

- A glass cell
The volume can vary, on demand.
This cell can also be thermostated.
With its 5 holes, the cell can fit RDE, counter electrodes, working electrodes and reference electrodes.

OrigaTrod Kit

When the OrigaTrod is used together with the OrigaBox, it is provided with a box. Thus, everything is safely transported.

This kit contains:
- OrigaTrod
- OrigaBox
- USB Key, containing the software (PC Control Panel)
- User's manual
- The convenient cords
- The box

Not delivered with tips, pellets or sample holders. But it has been designed to carry it, easily.

Reference: AR00735CIAL

OrigaLys provides **3** different software, depending on the use
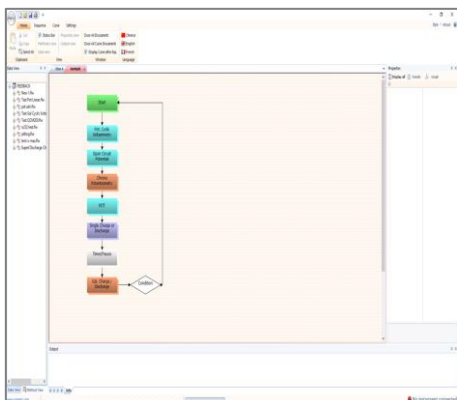
Origa**Master**

Dedicated to single-potentiostat.

Windows interface. Fully compatible with Windows 8 and 10.

Languages: 🇫🇷 🇬🇧 🇨🇳

Products' compatibility

• OrigaStat: OGS080, OGS100 and OGS200
• OrigaFlex: OGF500, OGF01A, OGF05A and OGF10A.
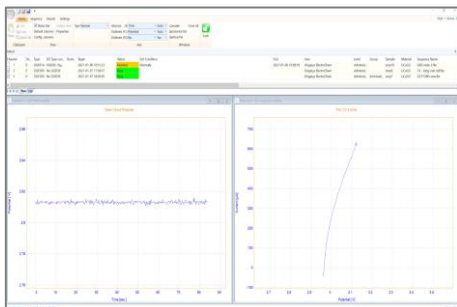
Origa**Viewer**

Dedicated to multi-potentiostat.

Windows interface. Fully compatible with Windows 8 and 10.

Products' compatibility

• OrigaFlex: OGF500, OGF01A, OGF05A and OGF10A.

Origa**Box** Interface

It allows to control the Speed of the RDE and the Magnetic Stirrer.
Windows interface. Fully compatible with Windows 8 and 10.

Products' compatibility

• OrigaBox: RDE (OrigaTrod)
• Magnetic Stirrer (OrigaMix)

XP, Vista and 7 are no longer maintained by Microsoft company. OrigaLys would not be liable if the software were to malfunction.

OrigaBox Interface

Speed Controller Software
Easy to use and licence free

Connected together with 6-pin DIN cable

USB 2.0

New version

✓ **Windows Interface**

✓ **Speed constant adjustable to control other kind of RDE**

✓ **Easy Start and Stop**

✓ **Accurate speed thanks to an optical encoder**

Controlling one OrigaTrod or more on the same PC is possible

Setting the Speed

✓ **0.35% digital resolution**

✓ **With analog signal, the speed rotation is controlled by potentiostat from other brands**

OrigaMaster

Easy to use and licence free

OrigaMaster

or

Thanks to the Power Supply

USB
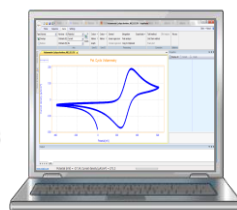
with or without EIS

Interactive methods
Changing scales in real time
Overlaying without limit

✓ **Windows Interface**

✓ **Easy graphic programming**

✓ **Up to 10,000 cycles**

✓ **Zooming in real time**

✓ **Export data to**
Excel, Open Office, Regressi ...

Opening two OrigaMaster or more at the same time
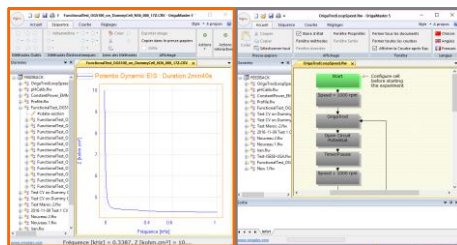
1st OrigaMaster   2nd OrigaMaster

✓ **Expert mode**

✓ **No point or time limitation**

✓ **Safety criteria**

✓ **Customization**

✓ **Multi-languages:**
English, French and Chinese

OrigaMaster's Methods

|		OrigaStat	OrigaFlex
VOLTAMMETRY			
Pot. Cyclic Voltammetry (CV)	☝	✓	
Pot. Advanced Cyclic Voltammetry	☝	✓	
Gal. Cyclic Voltammetry	☝	✓	
Pot. Linear Voltammetry	☝	✓	
Pot. CV 4 limits	☝	✓	
Stripping Voltammetry	☝	✓	
Staircase Voltammetry (SCV)	☝	✓	
CHRONO			
Open Circuit Potential (OCP)	☝	✓	
Chrono Amperometry (CA)	☝	✓	
Chrono Amperometry Expert	☝	✓	
Chrono Coulometry (CC)	☝	✓	
Chrono Potentiometry (CP)	☝	✓	
Chrono Potentiometry Expert	☝	✓	
Single Chrono Amperometry	☝	✓	
IMPEDANCE			
Pot. Dynamic EIS & Gal. Dynamic EIS		✓	
Pot. Fixed Frequency EIS (Capacitance)		✓	
Pot. Fixed Frequency EIS vs Time (HFR)		✓	
Gal. Fixed Frequency EIS vs Time (HFR)		✓	
CORROSION			
Pitting corrosion		✓	
General corrosion (Rp)		✓	
Coupled corrosion (Evans)		✓	
Polarization for corrosion (Tafel)		✓	
Harmonic Distorsion Analysis (HDA)		✓	✗
Zero Resistance Ammeter (ZRA)		✓ (not with OGS080)	✗
PULSE			
Pot. Differential Pulse (DPV)		✓	
Gal. Recurrent Differential Pulse		✓	
Pot. SW Voltammetry (SWV)		✓	
Potentiometric Stripping Analysis (PSA)		✓ (not with OGS080)	✗
BATTERIES, SUPER CAPACITORS and PHOTOVOLTAIC			
Single Charge or DisCharge	☝	✓	
Gal. Charge and DisCharge Cycle	☝	✓	
Expert Charge and DisCharge Cycle	☝	✓	
PITT & GITT	☝	✓	
Constant Power	☝	✓	
Constant Resistor	☝	✓	
Profile Generator	☝	✓	
Internal Resistance		✓	
I/V Characterization	☝	✓	
pH AND mV MEASUREMENT			
pH fixed Calibration		✓ (not with OGS080)	✗
pH auto Calibration		✓ (not with OGS080)	✗
pH measurement		✓ (not with OGS080)	✗
mV measurement		✓ (not with OGS080)	✗

☝ **Interactive methods**

OrigaViewer

Secure and licence free

OrigaViewer 2

Thanks to the Drive Unit

ETHERNET

Independent and simultaneous measurements
Temperature control & Safety criteria
Interactive methods

✓ **Windows Interface**

✓ **Save and store all the experiment conditions**

✓ **3 levels of users: Administrator, Supervisor and Operator**

The software is protected with ID and Password
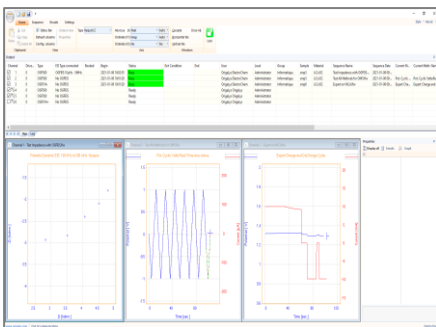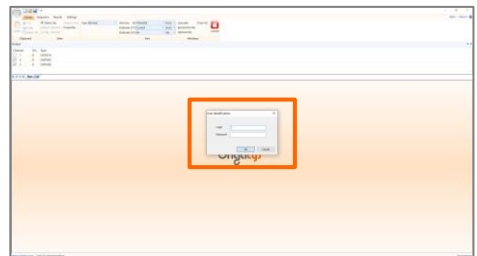
✓ **Recoverable Data thanks to a Buffer inside the instrument**

✓ **No point or time limitation**

✓ **Expert mode**

✓ **Customization**

OrigaViewer's Methods

		OGF500	OGF01A	OGF05A	OGF10A
VOLTAMMETRY					
Pot. Cyclic Voltammetry (CV)	☝	✓			
Pot. Advanced Cyclic Voltammetry	☝	✓			
Gal. Cyclic Voltammetry	☝	✓			
Pot. Linear Voltammetry	☝	✓			
Pot. CV 4 limits	☝	✓			
Stripping Voltammetry	☝	✓			
Staircase Voltammetry (SCV)	☝	✓			
CHRONO					
Open Circuit Potential (OCP)	☝	✓			
Chrono Amperometry (CA)	☝	✓			
Chrono Amperometry Expert	☝	✓			
Chrono Coulometry (CC)	☝	✓			
Chrono Potentiometry (CP)	☝	✓			
Chrono Potentiometry Expert	☝	✓			
Single Chrono Amperometry	☝	✓			
IMPEDANCE (With the OGFEIS module)					
Pot. Dynamic EIS & Gal. Dynamic EIS		✓			
Pot. Fixed Frequency EIS (Capacitance)		✓			
Pot. Fixed Frequency EIS vs Time (HFR)		✓			
Gal. Fixed Frequency EIS vs Time (HFR)		✓			
CORROSION					
Pitting corrosion		✓			
General corrosion (Rp)		✓			
Coupled corrosion (Evans)		✓			
Polarization for corrosion (Tafel)		✓			
Harmonic Distorsion Analysis (HDA)		✗			
Zero Resistance Ammeter (ZRA)		✗			
PULSE					
Pot. Differential Pulse (DPV)		✓			
Gal. Recurrent Differential Pulse		✓			
Pot. SW Voltammetry (SWV)		✓			
Potentiometric Stripping Analysis (PSA)		✗			
BATTERIES, SUPER CAPACITORS and PHOTOVOLTAIC					
Single Charge or DisCharge	☝	✓			
Gal. Charge and DisCharge Cycle	☝	✓			
Expert Charge and DisCharge Cycle	☝	✓			
PITT & GITT	☝	✓			
Constant Power	☝	✓			
Constant Resistor	☝	✓			
Profile Generator	☝	✓			
Internal Resistance		✓			
I/V Characterization	☝	✓			

☝ **Interactive methods**

OpH218

Benchtop pH meter

Radiometer's PHM210 Legacy
(same designer)

✓ **Sustainable and repairable**
✓ **Reliable and fast results**
✓ **Easy to use and simple connections**
✓ **Data transfers (Regressi, ExAo, Excel)**

Perfect for Teaching

- Easy to use interface
- Perfect specifications for Teaching
- Design to last
- 5-year warranty
- Compatible inferface to Radiometer pH-meters

Main Technical Specifications

pH range	-9 to 23 pH
mV range	±2000 m V
°C	-10°C to 110°C
pH resolution	±0.01 pH
mV resolution	±0.1 mV
°C resolution	±0.1
Measures	• Continous • Automatic
Buffers	1 to 3 buffers
Choosing buffers	• Automatic • Handbook selection • Manual
Criteria for agreeing to calibration	• Slope: 95 to 102% • Zero-pH: 5.80 to 7.50 pH Non-blocking criteria generating a warning

Data transfer

Analog output and RS232 communication

Analog output

- ✓ Connecting to analog recorders
- ✓ Controlling a stirrer

RS232 communication

- ✓ Printing results at the end of calibration
- ✓ pH-meter control

ANALOG OUT

16/12/2019	17:57	+0.2 mV 6.82 pH 25.1 °C unstable
16/12/2019	17:57	+0.1 mV 6.82 pH 25.2 °C
16/12/2019	17:59	+191.1 mV	3.57 pH 25.1 °C
16/12/2019	17:59	-191.0 mV	10.08 pH	25.2 °C
16/12/2019	17:59	-1118.6 mV	overload pH	25.2 °C unstable
16/12/2019	18:01	-421.6 mV	14.01 pH	25.1 °C
16/12/2019	18:02	-421.4 mV	14.16 pH	19 °C
16/12/2019	18:03	+299.1 mV	1.81 pH 30 °C
16/12/2019	18:03	+264.9 mV	2.38 pH 30 °C unstable
16/12/2019	18:04	+237.9 mV	2.83 pH 30 °C
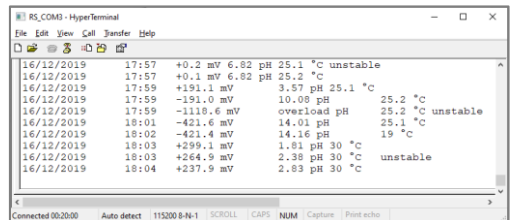
Control with HyperTerminal

USB communication and remote control

USB communication with a PC is provided by a DLL developed and provided by OrigaLys. Full documentation and an example of use with Microsoft Excel (pH collector) software are available for download on www.origalys.com. This allows real-time storage, display and tracing on a graph and pH/mV measurements based on time.
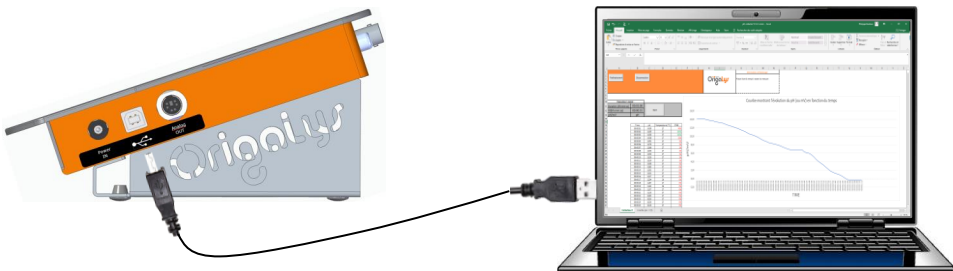
pH collector – Microsoft Excel

49

Electrodes

	Reference electrodes				Other
Models	① OGR005 Type REF321	② OGR004 Type REF421	③ OGR006 Type XR300	④ OGR003 Type XR110	⑤ D11OGL008 Type AL120
Dimensions	ø 8 x 103 mm	ø 8 x 103 mm	ø 8 x 120 mm	ø 8 x 120 mm	ø 8 x 140 mm
Body	Glass	Glass	Glass	Glass	Glass
REF systems	Ag/AgCl	Calomel	Ag/AgCl	Calomel	-
Electrolyte	KCl 3M with saturated AgCl	Saturated KCl	KCl 3M with saturated AgCl	Saturated KCl	-

	Combined pH electrodes			Non-combined pH electrodes	
Models	① OGPH201 Type pHC2401-8	② OGPH202 Type pHC3001	③ OGPH203 Type pHC3005	④ OGPH001 Type pHG301	⑤ OGPH002 Type pHG311
pH range	0 - 12	0 - 12	0 - 12	0 - 12	0 - 14
T°C range	-5 to 80°C	-5 to 80°C	-5 to 80°C	-5 to 80°C	-5 to 80°C
Dimensions	ø 12 x 103 mm	ø 12 x 103 mm	ø 8 x 103 mm	ø 8 x 103 mm	ø 8 x 103 mm
Body	Glass	Glass	Epoxy	Glass	Glass
REF systems	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl
Electrolyte	KCl 3M with saturated AgCl	KCl 3M with saturated AgCl	KCl 3M with saturated AgCl	Saturated KCl	Saturated KCl

See the full list of electrodes on www.origalys.com

pH meter Packs

Non-combined Calomel Pack

pH-meter OpH218

x 2

- ✓ Two cables
- ✓ One pH electrode
- ✓ One Calomel reference electrode

Non-combined Ag/AgCl Pack

pH-meter OpH218

x 2

- ✓ Two cables
- ✓ One pH electrode
- ✓ One Ag/AgCl reference electrode

Epoxy Combined Pack

pH-meter OpH218

- ✓ One cable
- ✓ One combined pH electrode in epoxy

Glass Combined Pack

pH-meter OpH218

- ✓ One cable
- ✓ One combined pH electrode in glass

Teaching Pack

OrigaStat – OGS080: Potentiostat, Galvanostat & EIS

- • Highlighting slow and fast systems
- • Observation of the diffusion level and the influence of agitation with the rotating electrode
- • Study of the field of electrochemical inertia of solvent
- • Study of the concepts of batteries, electrolyters and accumulators
- • Go further in TIPE with corrosion studies

OrigaMeter range – OpH218

Lycée Jacques Decour
Paris

" The laboratory of the Jacques Decour high school was interested in buying the Origalys pH meter: the OpH218 because we knew the Radiometer range.

The range has been improved with the ability to make calibrations from 100% manual to 100% automatic according to needs and class levels.

The device is space-saving, lightweight and very easy to use. We were also interested in connecting it very easily to the computer via Excel and therefore not needing yet another software. "

" We find the pH meter ergonomic, very easy to use and qualitative aspect.

We particularly appreciate the fact that its calibration is not limited in range of errors and cannot prevent measurements. "

Lycée Raspail, Paris

Lycée Balzac, Paris

" The pH meter is very easy to use, and it is space-saving.

They are very suitable for students in preparatory classes than for high school students. "

" The Origalys OpH218 pH-meter is just what we needed: easy to use (just follow the on-screen instructions), easy to store, space-saving.

It is the worthy successor of the phm210. "

Lycée Michelet,
Vanves

Testimonials collected by JEULIN company.

OCD218

Benchtop Conductivity Meter

Radiometer's CDM210 Legacy
(same designer)

- ✓ **Sustainable and repairable**
- ✓ **Reliable and fast results**
- ✓ **Easy to use and simple connections**
- ✓ **Data transfers (Regressi, ExAo, Excel)**

Perfect for Teaching

- Easy to use interface
- Perfect specifications for Teaching
- Design to last
- 5-year warranty
- Compatible inferface to Radiometer conductivity Meters

Main Technical Specifications

Conductivity	7 ranges from 0 – 1 000 nS/cm to 0 – 1 S/cm
Resolution	From Rs = 100 pS to 100 µS
°C	-10°C to 110°C
Resistivity	1 Ω.cm to 100 MΩ.cm
TDS (Total Dissolved Solids)	4 to 20 mg/l
Salinity	2 to 42
Calibration	• Automatic • Manual • Static
Range selection	Automatic: Conductivity, Resistivity, TDS and Salinity Manual: Conductivity.

GARANTIE INSTRUMENT
5 ANS YEARS AÑOS
INSTRUMENT WARRANTY

FABRIQUÉ EN FRANCE
MADE IN FRANCE

ALREADY TESTED
AND APPROVED
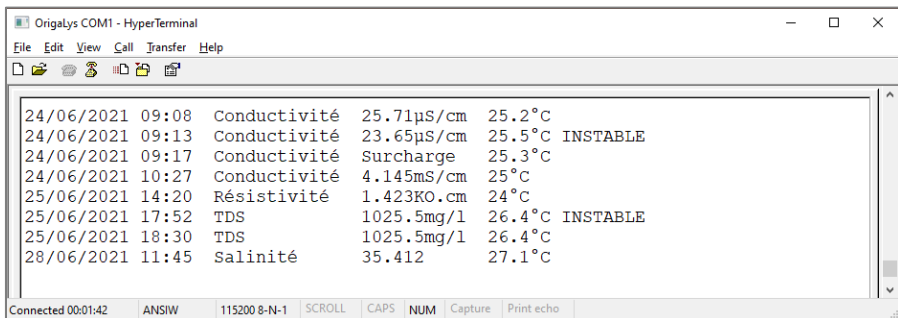
Data transfer

Analog output and RS232 communication

✓ Connecting to analog recorders
✓ Controlling a stirrer

« ANALOG OUT »

RS232 Communication

✓ Printing the results at the end of the calibration
✓ Controlling the conductometer

24/06/2021 09:08	Conductivité	25.71µS/cm	25.2°C	
24/06/2021 09:13	Conductivité	23.65µS/cm	25.5°C	INSTABLE
24/06/2021 09:17	Conductivité	Surcharge	25.3°C	
24/06/2021 10:27	Conductivité	4.145mS/cm	25°C	
25/06/2021 14:20	Résistivité	1.423KO.cm	24°C	
25/06/2021 17:52	TDS	1025.5mg/l	26.4°C	INSTABLE
25/06/2021 18:30	TDS	1025.5mg/l	26.4°C	
28/06/2021 11:45	Salinité	35.412	27.1°C	

Control with HyperTerminal

USB Communication

✓ Controlling the conductometer

Conductivity Meter Packs OCD218

Conductivity Meter Pack Epoxy

Conductivity Meter OCD218

- ✓ One cable
- ✓ One conductivity cell Epoxy body with Platinum plates

Conductivity Meter Pack Glass

Conductivity Meter OCD218

- ✓ One cable
- ✓ One conductivity cell Glass body with Platinum plates

Simple Pack

Conductivity Meter OCD218

NOTE: All our packs are delivered with a power supply.

① ②

	Conductivity cells with Platinum plates	
Models	① OGEPOXY002 Type CDC754-9	② OGGGLASS001 Type XE100
Cell constant (cm^{-1})	1,0	1,0
Temperature range	0°C to 100°C	0°C to 80°C
Dimensions	ø 12 x 103 mm	ø 12 x 103 mm
Number of poles	2 replatinable poles	2 replatinable poles
Connection	Screw Head S7	Screw Head S7
Body	Epoxy	Glass

Origa**Sens** - **Electrodes**

Electrode Overview

Reference	Hg/HgO, Ag/AgCl, ECS, Cu/CuSO$_4$ and Hg/Hg$_2$SO$_4$
Auxiliary and Working	Silver rod ø3mm, Platinum disc ø10mm, Platinum wire ø1mm, Platinum plate 5x5mm
Combined	Platinum ring ø8x1,5 + Ag/AgCl
Selective	Fluor, Nitrate, Calcium, Cadmium, Lead, …
pH	Combined and non-combined, 0-14
Other	Liquid Junction Protection Tube ø12: 140 mm, porous pin, NS14/23 sleeve joint

Origa**access** - **C**ords

Cord Overview

Connectors	BNC, UHF, Banana ø2 or 4mm, DIN, pin DIN and other on demand
Adaptors	BNC/BNC, BNC/Banana, Banana/double banana, UHF/BNC
Shielded?	Standard cords are shielded Not shielded on demand
Length	Standard: 0.25cm, 1m or 2m Any kind of length on demand
Power Cord	FR, UK, US, CH and more on demand
Other	- Isolated Alligator clamp - Standard Alligator clamp - Temperature probe - Crystal tube

Electrode Catalog
OrigaLys ElectroChem SAS
Made in know-How
Accessories for electrochemical analytical systems systems

Ask for the ELECTRODE CATALOG on www.origalys.com

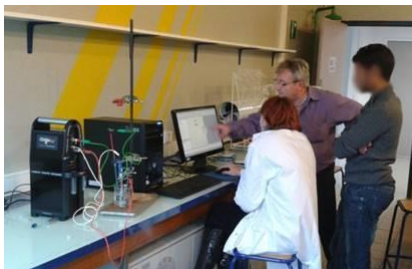# **R**adiometer's Maintenance

As former designers of Radiometer and Tacussel, we are able to give you a repair diagnostic of all your instruments from Radiometer Analytical and Tacussel:

- ✓ **VoltaLab range**, such as PST006, PGZ100, PGP201, PST050, PGZ301 or PGZ402.
- ✓ **EDI101 and CTV101.**

In European Union only

General Services

Training day

OrigaLys offers its expertise and know-how to enable you to be more competitive and efficient or train you to the use of OrigaLys' devices in your business or research.

Do not hesitate to consult us if you have any needs in the following areas:
- ✓ Electrochemistry
- ✓ Batteries
- ✓ Corrosion
- ✓ Coatings

Customization

The accessory or the device, you are looking for, does not exist yet? You do not find the device which fits your needs?

- ✓ OrigaLys can design, with you and for you, a special equipment.
- ✓ From the first specifications to the final products, we are by your side.
- ✓ We can create, with you and then implement, a customized method into our software.

Compatibility

	OGS080	OGS100	OGS200	OGF500	OGF01A	OGF05A	OGF10A
OrigaTrod	✓	✓	✓	✓	✓	✓	✓
OrigaBox	Built-in	Built-in	Built-in				
OrigaTrod Lt	✓	✓	✓	✓	✓	✓	✓
OrigaMix	✓	✓	✓	✓*	✓*	✓*	✓*
OrigaMµ	✗	✓	✓	✓	✓	✓	✓
OrigaBoost	✗	✓	✓	✗	✗	✗	✗
OGFEIS	✗	✓	✓	✓	✓	✓	✓
OrigaCell Kit	✓	✓	✓	✗	✗	✗	✗
T°C probe	✗	✓	✓	✓	✓	✓	✓
Battery Holder	✗	✗	✗	✓	✓	✓	✓
OrigaDiff	✗	✓	✓	✓	✓	✓	✓
OrigaTest	✓	✓	✓	✓	✓	✓	✓

* To be used with the OrigaBox (Speed Controller)

Examples of compatibilities

1

OGS100
+
OGFEIS
+
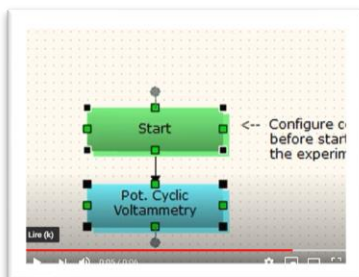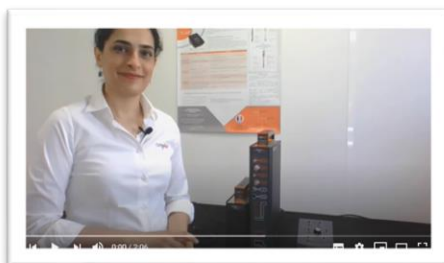OrigaCell Kit

2

OGS200
+
OrigaTrod
+
OrigaCell Kit

Available on www.origalys.com:
- ✓ **Application Notes**
- ✓ **Tutorial videos**

OrigaLys' YouTube Channel

BATTERIES
www.origalys.com

CORROSION
www.origalys.com

FABRIQUÉ EN FRANCE
MADE IN FRANCE

EDUCATION
www.origalys.com
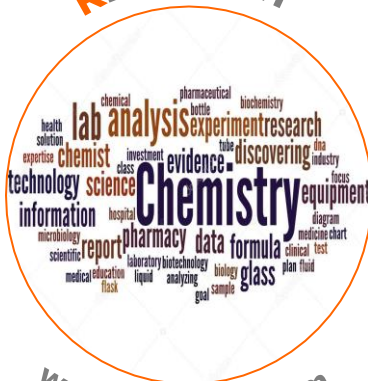
RESEARCH
www.origalys.com

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Country **R**epresentative

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