

No. 01
**ELECTROCHEMIST
CATALOGUE**

ISE ANALYTICAL SOLUTIONS

Electrochemical Solutions
for Ion Measurement.

Experts on innovative
analytical instrumentation for
a multitude of industries.

www.ntsensors.com



ES France - Département Bio-tests & Industries
127 rue de Buzenval BP 26 - 92380 Garches



Tél. 01 47 95 99 90
Fax. 01 47 01 16 22



e-mail : bio@es-france.com
Site Web : www.es-france.com

NT SENSORS

ABOUT US

NT Sensors designs, develops and manufactures all the equipment in order to obtain fast and reliable measurements in an easy and robust way; in a laboratory or in the field.

NTSensors offers an efficient solution on analysis of chemical ionic species.

Implementation of nanotechnology in a laboratory classical technique, such as ion-selective electrodes (ISE), has overcome the traditional drawbacks on the classic ones.

NT Sensors was founded in 2008 and designs, develops and manufactures ion-selective electrodes based on patented carbon nanotubes technology.

NT Sensors has its own I+D+I department formed by a team execute projects on customer demand and collaborate with third-party companies task for EU projects or confidential research programs.

From the evaluation process before start up any work, including the time-work and result presentation, all is under the most strict confidentiality agreement conditions.



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OUT

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Ion-Selective Electrodes & Instruments

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ISE APPLICATIONS

If you need ion measurement meters and utilities, you're in the right place!

In our company, we specialize in creating ion measurement meters and utilities to meet your specific needs.

Is there anything in particular you would like to measure or any features you would like your meter to have?

Food industry: monitor salinity and mineral content in food and beverages.

Agriculture: monitor soil quality and determine nutrient availability for plants.

Aquaculture: monitor water quality and control the chemical balance in ponds and aquariums.

Wastewater treatment: monitor water quality and control the treatment process.

Chemical industry: for monitoring water quality and controlling chemical processes.

Mining industry: for water quality monitoring and pollution control in mines and quarries.

Pharmaceutical industry: monitor water quality and control chemical processes in the production of medicines.

Medical industry: for monitoring body fluids and intravenous solutions in patients.

Beer/wine industry: for water quality monitoring and mineral content control in beers and other alcoholic beverages.

Textile industry: monitor water quality and control chemical processes in the production of fabrics and clothing.

Environmental: monitoring water quality in rivers, lakes, and oceans.

Air quality: monitoring the concentration of ions in the air.

Research: monitoring the concentration of ions in laboratory experiments.

Water treatment: monitoring the quality of drinking water.

Cosmetic industry: monitor water quality and control chemical processes in the production of cosmetics and personal care products.

Food processing: monitoring the quality of food products.

Energy production: for monitoring water quality in thermoelectric and nuclear plants.



(Na⁺) Sodium measured in intravenous solutions, body fluids for patients and water quality in the food industry control salinity.

(NH₄⁺) Ammonium water quality measurement in aquaculture and wastewater treatment plants, soil monitoring in agriculture determine the availability of nitrogen for plants.

(NO₂⁻) Nitrite measurement of water quality in aquaculture and wastewater treatment plants, detection of groundwater contamination.

(NO₃⁻) Nitrate: measurement of water quality in agriculture and in the detection of groundwater pollution, monitoring of water quality in drinking water treatment plants.

(ClO₄⁻) Perchlorate measuring water quality in the chemical and pyrotechnics industry.

(Br⁻) Bromide water quality measurement in the chemical and electroplating industry, monitoring water quality in swimming pools, spas and to detect the presence of volatile organic compounds containing bromine..

(I⁻) Iodide water quality measurement in the chemical and electroplating industry, monitoring iodine concentration in intravenous solutions for patients and monitoring iodine concentration in food and dietary supplements to ensure adequate intake.

(Ca²⁺) Calcium measurement of calcium concentration in blood and in intravenous solutions for patients, monitoring water quality in the food industry, brewery and soil in agriculture to determine the calcium content and its impact on plant growth.



APPLICATIONS



(Cl-) Chloride measurement of chloride concentration in body fluids and intravenous solutions for patients, monitoring of water quality in drinking water treatment plants and salinity in the food industry and in processed food production.

(Cu2+) Copper water quality measurement in the mining and electroplating industry, water quality monitoring in drinking water treatment plants and to detect the presence of copper particles.

(F-) Fluoride water quality measurement in drinking water treatment plants, monitoring fluoride concentration in dental solutions, toothpastes and fluoride concentration in food and dietary supplements to ensure adequate intake.

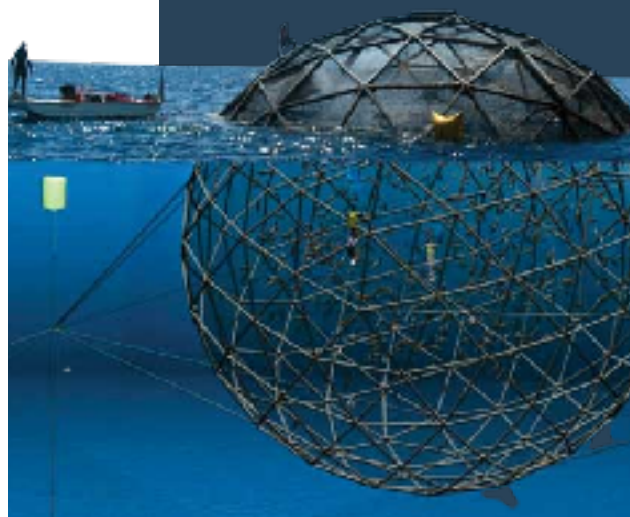
(K+) Potassium measurement of potassium concentration in blood and in intravenous solutions for patients, monitoring of soil quality in agriculture and water quality in the food and brewing industry/ wine to control potassium content

(Li+) Lithium measurement of lithium concentration in blood and in intravenous solutions for patients, monitoring water quality in the battery industry, in glass production and detect the presence of lithium and ensure its safety for human consumption.

(Mg2+) Magnesium measurement of magnesium concentration in blood and in intravenous solutions for patients, monitoring soil quality in agriculture to determine the magnesium content and its impact on plant growth.



APPLICATIONS



FUTURE OF THE FOOD AND BEVERAGE INDUSTRY



NT SENSORS

ION SELECTIVE ELECTRODES



All-solid-state selective electrodes based on Carbon Nanotube Technology.

Miniaturized Ion Probe. Single Ion / Multi Ion Probe. NT Sensors electrodes are made with our patented technology. Allow to work in all positions (horizontal/inverse). No light or ORP sensitivity.

ION SELECTIVE ELECTRODES:

(Cl-) Chloride
(Cu²⁺) Copper
(F-) Fluoride
(K+) Potassium
(Li+) Lithium
(Mg²⁺) Magnesium
(Na+) Sodium

NH₄⁺) Ammonium
(NO₂-) Nitrite
(NO₃-) Nitrate
Reference Electrode
(ClO₄-) Perchlorate
(Br-) Bromide
(I-) Iodide

NT SENSORS

ION SELECTIVE ELECTRODES

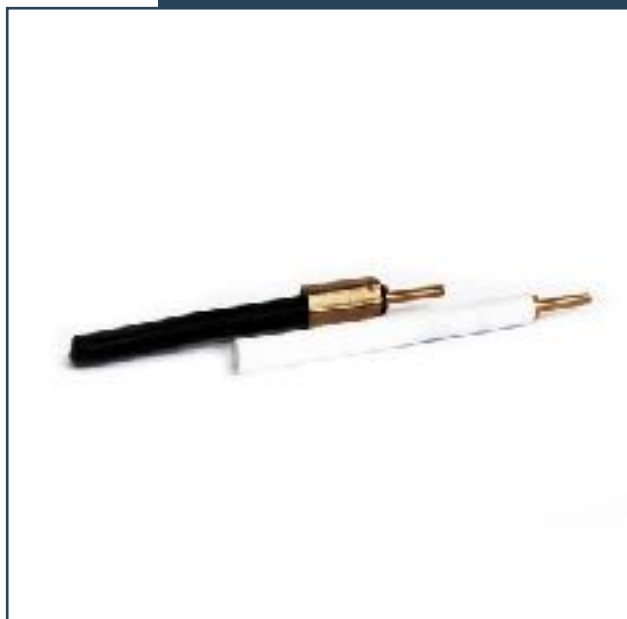


NANO ISE

Miniaturized Half-cell Ion Selective Electrode.
All solid-state. For ultra low volume.

DESCRIPTION	
Diameter	2,5 mm
Length	45 mm
Connector	Pin 1 mm Male
Cable	1m BNC to female plug

Standard Ion/mV/pH Meters.
Use crocodile clump.
Compatible with classic Reference Electrode

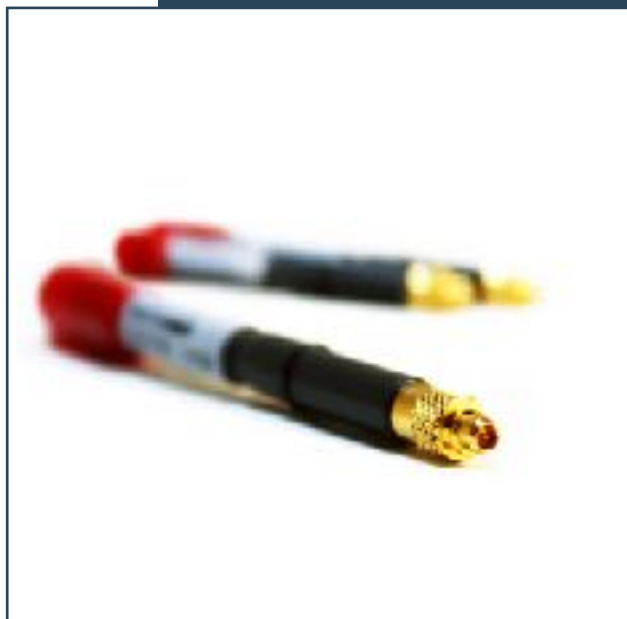


MINI ISE

Miniaturized Half-cell Ion Selective Electrode.
All solid-state. Robust plastic body.

DESCRIPTION	
Diameter	4,6 mm
Length	50 mm
Connector	MMCX
Cable	1m BNC to female

Application Standard Ion/mV/pH Meters.
Compatible Classic Reference Electrode.
Compatible with Single ION or Multi ION Head.



NT SENSORS

TECHNICAL SPECIFICATIONS



Ion	Sensitivity	Linear range	pH	Tresp	T ^a (°C)	Interferences
Ammonium NH₄⁺	54±5	0,09 a 9000 mg/L 5 ⁻⁶ a 0.5 mol/L	4 a 8.5	< 1 min	5 a 50	K (-0,8); Na (-2,7) Mg (-3,2); Ca (-4)
Bromide Br⁻	-54±5	0,4 a 8000 mg/L 5e-6 a 0,1 mol/L	1 a 12	< 1 min	5 a 50	Error presence of Ag, S, I or C N Cl (-2,7); OH (-4,5)
Calcium Ca²⁺	24±5	0,4 a 4000 mg/L 1e-5 a 0,1 mol/L	3.5 a 8	< 1 min	5 a 50	NH ₄ (-3); K (-3,6) Na (-3,7)
Chloride Cl⁻	-54±5	1,5 a 35000 mg/L 4e-5 a 1 mol/L	2 a 12	< 1 min	5 a 50	Error presence of Ag or S - I damage irrev. membrane
Copper Cu²⁺	24±5	0,6 a 3200 mg/L 1e-6 a 0,05 mol/L	2 a 7	< 1 min	5 a 50	Error presence of Ag or Cl S Alterations presence or I
Fluoride F⁻	-54±5	0,1 a 1900 mg/L 5e-6 a 0,1 mol/L	4 a 8	< 1 min	5 a 50	OH (-1) Maintain pH < 8
Iodide I⁻	-54±5	0,1 a 12000 mg/L 1e-6 a 0,1 mol/L	2 a 12	< 1 min	5 a 50	Error presence of Ag or S Br (-3,4); Cl (-6)
Lithium Li⁺	54±5	0,1 a 5000 mg/L 1e-5 a 0,7 mol/L	2 a 12	< 1 min	5 a 50	Na (-2,3); K (-2,4) H (-3)
Magnesium Mg²⁺	24±5	2,4 a 2400 mg/L 1e-4 a 0,1 mol/L	3 a 8.5	< 1 min	5 a 50	Ca (-1); K (-3,6) Na (-3,9)
Nitrate NO₃⁻	-54±5	0,6 a 31000 mg/L 1e-5 a 0,5 mol/L	2 a 11	< 1 min	5 a 50	Br (-1,2); NO ₂ (-1,7) OH (-1,8); Ac(-2,2)
Nitrite NO₂⁻	54±5	2,5 a 1000 mg/L 5,4e-5 a 0,02 mol/L	4 a 6	< 1 min	5 a 50	SCN (-0,2); I (-2,2) ClO ₄ (-2,4); Br (-3,3)
Perchlorate ClO₄⁻	-54±5	1 a 10000 mg/L 1e-5 a 0,1 mol/L	1 a 11	< 1 min	5 a 50	SCN (-1,7); NO ₃ (-1,7) I (-1,7)
Potassium K⁺	54±5	0,4 a 39000 mg/L 1e-5 a 1 mol/L	1 a 9	< 1 min	5 a 50	NH ₄ (-2,1); Ca (-3,9) Li (-4,3); Na (-4,6)
Sodium Na⁺	54±5	2,3 a 23000 mg/L 3e-6 a 1 mol/L	1 a 9	< 1 min	5 a 50	K (-2,5); Ca (-3) Li (-3,2)



NT SENSORS

SINGLE ION PROBE



Half-cell Ion Selective Electrode.

Single ION acts as a holder for mini electrode, being able to exchange different sensors with only one body/cable connector. Single ION optimizes the resources of connector/cable and housing for any update on ISE sensors.

Just ordering new tips, you will dispose of new electrodes to measure with the BNC end.

1 HEAD
FOR

15 ELECTRODE TIPS AVAILABLE

DESCRIPTION		Use with:
Diameter	12 mm	Standard Ion/mV/pH Meters. Works with a Standard Reference Electrode.
Length	150 mm	
Connector	Connector BNC	
Cable	1m or 5m length	

NT SENSORS

MULTI ION PROBE



MULTI-ION HEAD

For up 7 Modular Electrodes

Innovative concept for ION Selective Electrode handling
Multiple holder for using several ions
as one handy probe. Customize your own probe, multiple electrodes in a small 25mm outer diameter probe.

1 PROBE
FOR

7 ELECTRODES
PARAMETERS

DESCRIPTION		Use with:
Diameter	25 mm	Available and customizable input. Compatible with multichannel meters. Compatible with imacimus series. Works with a Standard Reference. For imacimus series ION meters. Customizable for OEM.
Length	150 mm	
Connector	USB 3.0	
Cable	1m length	

NT SENSORS

MV / ION / PH METERS

IMACIMUS 2



Simultaneous measurement of 2 channels.
Individual calibration up to 5 points.

DESCRIPTION	
Channels	2
Connector type	1x BNC + 1x USB 1x Mini USB (power/data)
Use with	pH, Single ION probe, Half-cell Electrodes or Multi ION Probe
Measuring range	-2500 a 2500 mV

Online mV or Concentration monitoring
Data in *.csv or Excel files
Software Windows (required /included)



IONS AVAILABLE FOR IMACIMUS 2 SERIES:

(NH ₄ ⁺) Ammonium	(Ca ²⁺) Calcium
(NO ₂ ⁻) Nitrite	(Cl ⁻) Chloride
(NO ₃ ⁻) Nitrate	(Cu ²⁺) Copper
(Br ⁻) Bromide	(F ⁻) Fluoride
(I ⁻) Iodide	(K ⁺) Potassium
(Na ⁺) Sodium	(Li ⁺) Lithium
(Mg ²⁺) Magnesium	

If you need ion measurement meters and utilities, you're in the right place!

Is there anything in particular you would like to measure or any features you would like your meter to have?

NT SENSORS

IMACIMUS 5 & 10



ALL IN ONE – ALL AT ONCE

imacimus series

JUST IN 60 SECONDS

New concept of Ion meter equipment. Measure of pH, Selective Ion simultaneously. Wide range of functions.

imacimus series are complete electrochemical instruments.

IONS AVAILABLE FOR IMACIMUS 5 & 10 SERIES:

(Na⁺) Sodium
(NH₄⁺) Ammonium
(NO₃⁻) Nitrate
(Mg²⁺) Magnesium

(Ca²⁺) Calcium
(Cl⁻) Chloride
(K⁺) Potassium

NT SENSORS

IMACIMUS 5



60 JUST IN SECONDS



Simultaneous measurement up to 4 channels.
Individual calibration up to 5 points.

DESCRIPTION	
Channels	5
Connector type	1x BNC + 1x USB 1x Mini USB (power/data)
Use with	pH, Single ION probe, Half-cell Electrodes or Multi ION Probe
Measuring range	-2500 a 2500 mV

Online mV or Concentration monitoring
Data in *.csv or Excel files
Software Windows (required /included)



NT SENSORS

IMACIMUS 10



60 JUST IN SECONDS



Simultaneous measurement up to 8 channels.
Individual calibration up to 5 points.

DESCRIPTION	
Channels	8
Connector type	1x BNC + 1x USB 1x Mini USB (power/data)
Use with	pH, Single ION probe, Half-cell Electrodes or Multi ION Probe
Measuring range	-2500 a 2500 mV

Online mV or Concentration monitoring
Data in *.csv or Excel files
Software Windows (required /included)



NT SENSORS

STANDARDS SOLUTIONS



Standard solutions required to calibrate ion-selective electrodes.

We provide single salt solutions
for different parameters.

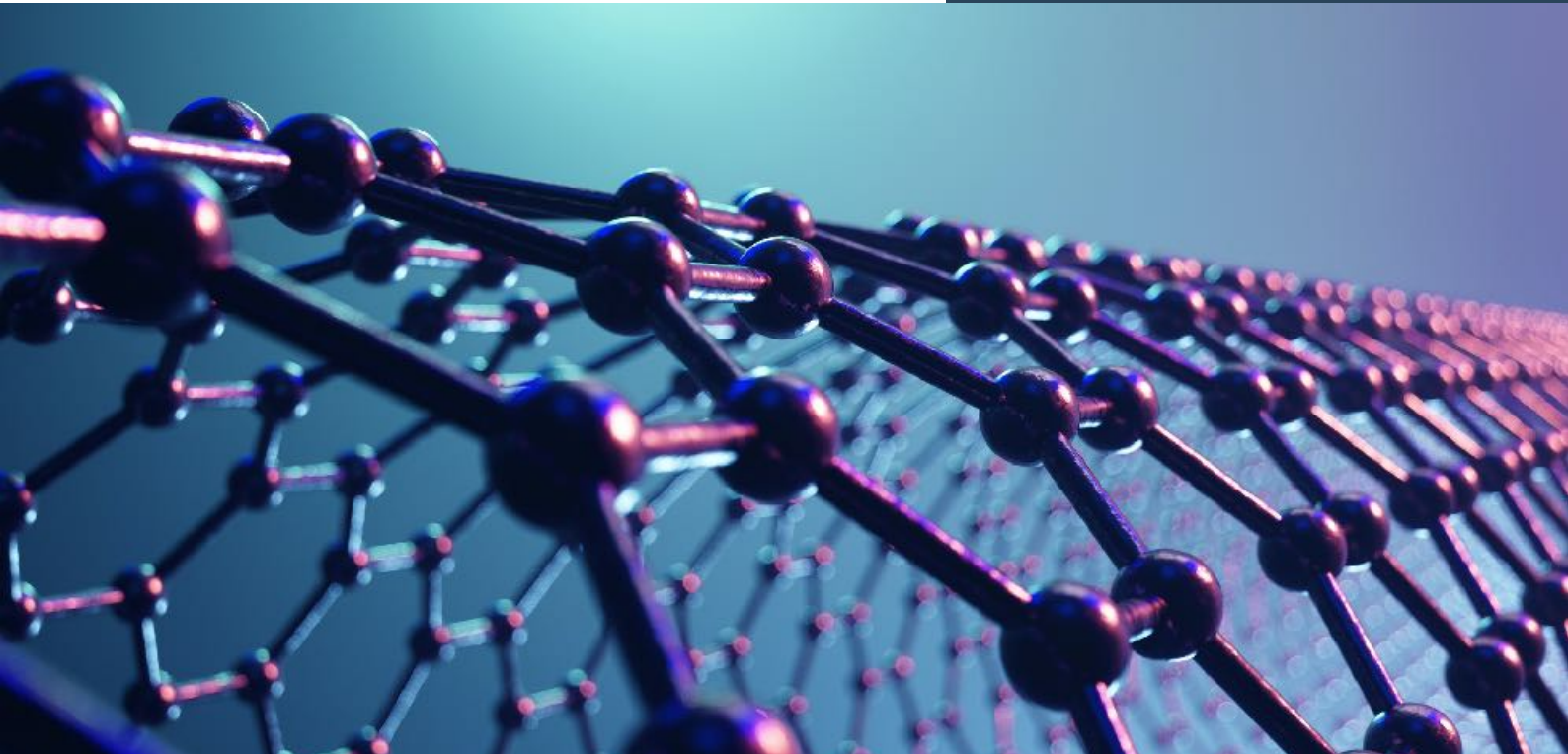
Other concentrations available
upon request.

Different sizes . Also see Multi
ION Standards section

STANDARDS SOLUTIONS:

(Ca²⁺) Calcium
(Cl⁻) Chloride
(Cu²⁺) Copper
(F⁻) Fluoride
(K⁺) Potassium
(Li⁺) Lithium
(Mg²⁺) Magnesium

(NH₄⁺) Ammonium
(NO₂⁻) Nitrite
(NO₃⁻) Nitrate
(ClO₄⁻) Perchlorate
(Br⁻) Bromide
(I⁻) Iodide
(Na⁺) Sodium



MULTI-ION STANDARD SOLUTIONS FOR ION-SELECTIVE SENSORS

**Just use 1 set of standards
to calibrate up to seven
parameters at once.**

Multi ION Standards are designed to simultaneously calibrate up to 7 parameters within the use of IMACIMUS meters. Standard of medium range are by default.

As a function of the typology of your sample matrix, you can require to choose additional Standard Solutions, considering your expected target sample concentration.

Ammonium
Calcium
Chloride
Magnesium
Nitrate
Potassium
Sodium



Multi ION Calibration Standard Solutions

TYPICAL USE	ORDER CODE	ION (mg/L)	Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
GENERAL USE	22HP08	High Std.	360	750	390	230	40	1320	110
		Low Std.	36	75	39	23	4	132	11
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
SEAWATER	22SW03	High Std.	500	16000	500	7500	50	845	1200
		Low Std.	250	12000	250	3750	25	423	600
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
CROSSED SALINITY	21HP10	High Std.	360	1600	390	810	140	1550	110
		Low Std.	36	160	39	81	14	155	11
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
SAP, CONCENTRATES, FERTILIZERS	22SAV00	High Std.	1000	3530	5000	500	500	10000	500
		Low Std.	100	353	500	50	50	1000	50
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
SOIL EXTRACT, EDAR, LIXIVIATES	22TLB2	High Std.	200	425	120	275	16	450	40
		Low Std.	20	43	12	28	2	45	4
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
MINERAL – TAP WATER	22LR03	High Std.	90	185	50	80	10	270	40
		Low Std.	9	19	5	8	1	27	4
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
ALGAE MEDIA	23SP108	High Std.	0,4	600	11	535	-	10	10
		Low Std.	4	6000	110	5350	-	100	100
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
WATER HARDNESS	23WH01	High Std.	500	-	-	-	-	-	1500
		Low Std.	50	-	-	-	-	-	150
			Ca ²⁺	Cl ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₃ ⁻	Mg ²⁺
SALINITY	23HS301	High Std.	-	10000	-	6500	-	-	-
		Low Std.	-	1000	-	650	-	-	-

Multi ION Calibration Standard Solutions

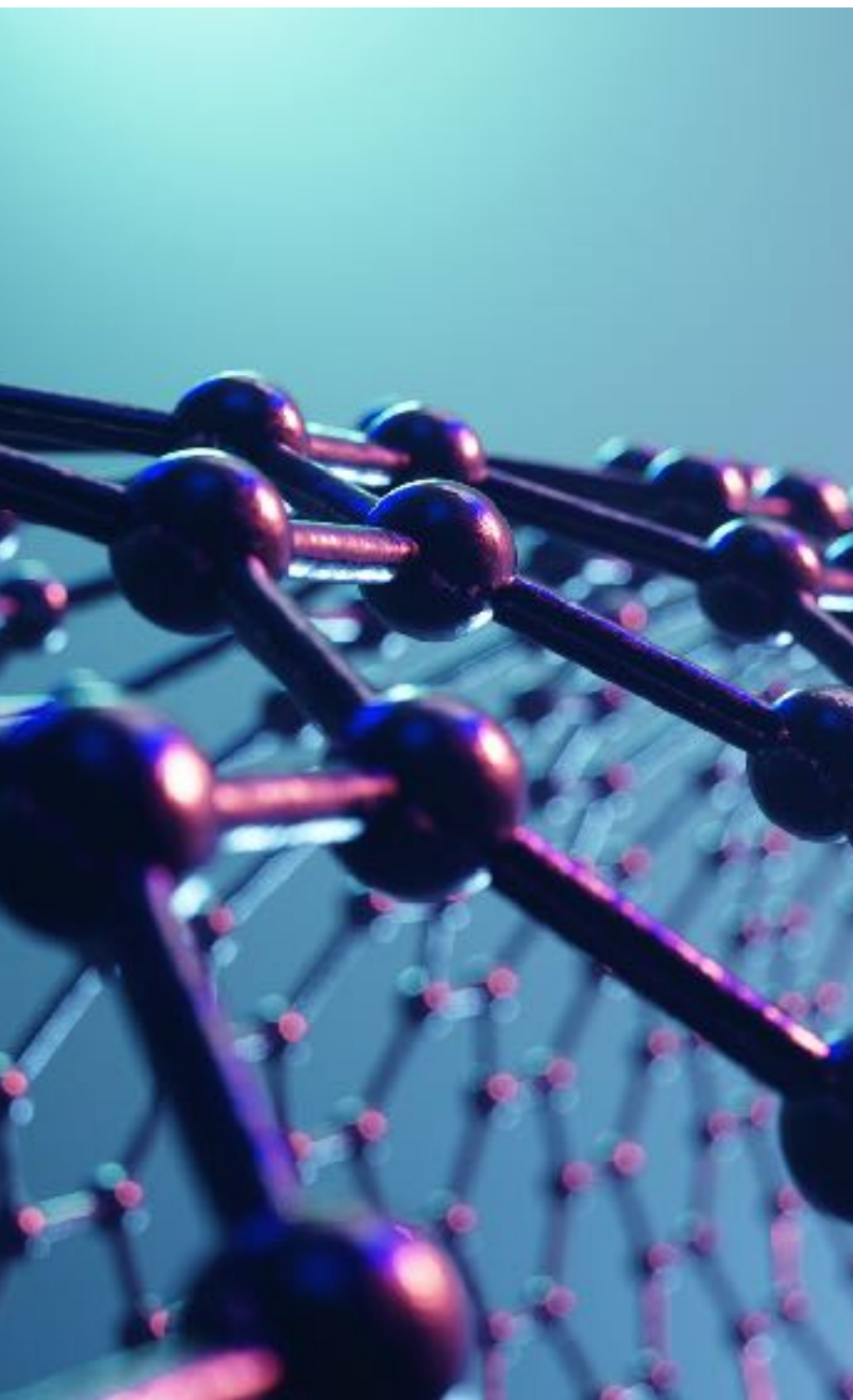
Multi ION Standards are designed to simultaneously calibrate up to 7 parameters within the use of IMACIMUS multi-parameter meters.

These standard solutions, are useful for a wide range of samples, from different type and composition, and also can have used with extrapolation from the calibration curve. *In the table are detailed the maximum and minimum for each calibration standard and for each ionic specie.

Our technical department can formulate specific and customized calibration range, please contact us for further information.

Please also consult all available single ion standards, for individual calibration from single salts.





No.02

SPECIAL SETS PRODUCTS

ISE ANALYTICAL SOLUTIONS

Electrochemical Solutions
for Ion Measurement.

Experts on innovative
analytical instrumentation for
a multitude of industries.

www.ntsensors.com



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NT SENSORS

IMACIMUS 2 KIT



Imacimus 2

Work with Single Ion Probe.

Allow work in all positions (horizontal/inverse).

Night or ORP sensitivity.

Select your ion selective electrode

(NH₄⁺) Ammonium

(NO₂⁻) Nitrite

(NO₃⁻) Nitrate

(Br⁻) Bromide

(I⁻) Iodide

(Na⁺) Sodium

(Mg²⁺) Magnesium

(Ca²⁺) Calcium

(Cl⁻) Chloride

(Cu²⁺) Copper

(F⁻) Fluoride

(K⁺) Potassium

(Li⁺) Lithium

Measurement of 1 ion + pH

Channels	2	Individual calibration up to 5 points GLP Customize your own standards mV reading Online mV or Concentration monitoring Data in *csv or Excel files
Measuring range	1 to >10.000 mg/L	
Resolution	0,01 pH / de 0 a 1.0 ppm : 0.1 ppm de 0 a 9999 ppm : 1ppm	
Minimum sample	10mL	



imacimus 2 SERIES

NITRATE ISE SERIE

- Studies of water quality
- Analysis of soil nutrient extracts
- Soil and plant tissue analysis
- Food analysis
- Monitoring of discharged water from factories
- Wastewater monitoring
- Environmental monitoring
- Groundwater and surface water monitoring



ISE range

1 > 62.000mg/L

pH range

2 > 11

Main interferences

 $K(NO_3^-, Br^-) = 10^{-1.5}$, $K(NO_3^-, NO_2^-) = 10^{-1.7}$
 $K(NO_3^-, OH^-) = 10^{-1.8}$, $K(NO_3^-, CH_3COO^-) = 10^{-2.2}$

AMMONIUM ISE SERIE

- Environmental, agricultural and industrial monitoring
- Measurement in drinking water, tap and sewage
- Aeration tanks
- Ammonium decomposition
- Optimization of the treatment process
- Ammonium determination
- Direct measurement
- Compensation of cross sensitivities



ISE range

0.09 > 9.000 mg/L

pH range

4 > 8.5

Main interferences

 $K(NH_4^+, K^+) = 10^{-1.0}$, $K(NH_4^+ + Ca^{2+}) = 10^{-4.0}$
 $K(NH_4^+ + Na^+) = 10^{-2.9}$, $K(NH_4^+, Mg^{2+}) = 10^{-3.2}$

SODIUM ISE SERIE

- Sewage
- Drinking water
- Water quality
- Environmental control
- Mining and processing of petroleum
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

2,3 > 23.000mg/L

pH range

1 > 9

Main interferences

 $K(Na^+, Li^+) = 10^{-3.2}$, $K(Na^+, K^+) = 10^{-2.5}$
 $K(Na^+, Ca^{2+}) = 10^{-4.0}$



imacimus 2 SERIES

Include:

- 1x Dual Channel ION/ mV/ pH / ANALIZER for PC
- 1x Software for Windows (free download)
- 1x USB cable for data/power
- 1x Single ION PROBE. Holder for up 1 Mini ISE.
- 1x Mini Magnesium Electrode
- 1x Reference electrode/pH
- 1x Calibration Standard 10 mg/L 100mL
- 1x Calibration Standard 100 mg/L 100mL
- 1x Calibration Standard 1000 mg/L 100mL
- 1x Buffers pH4 (50 ml)
- 1x Buffers pH7 (50 ml)
- 1x User manual

CALCIUM ISE SERIE

- Systems of softening of water
- Drinking water and mineral waters
- Analysis of soils and nutrients
- Blood electrolytes/ clinical analysis
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

0,4 > 4.000mg/L

pH range

3,5 > 8

Main interferences

 $\text{KCa}^{2+} \text{ H}^{+} = 10^{-2.9} / \text{KCa}^{2+} \text{ Na}^{+} = 10^{-3.7}$
 $\text{KCa}^{2+} \text{ K}^{+} = 10^{-3.6} / \text{KCa}^{2+} \text{ NH}_4^{+} = 10^{-3.0}$

POTASSIUM ISE SERIE

- Agriculture
- Analysis of soils and nutrients
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control
- Ground detection
- Precision farming



ISE range

0,3 > 23.000mg/L

pH range

1 > 9

Main interferences

 $\text{K (K}^{+}, \text{NH}_4^{+}) = 10^{-2.1} ; \text{K (K}^{+}, \text{Li}^{+}) = 10^{-4.3}$
 $\text{K (K}^{+}, \text{Na}^{+}) = 10^{-4.6} \text{ K (K}^{+}, \text{Ca}^{2+}) = 10^{-3.9}$

BROMIDE ISE SERIE

- Pharmaceutical industry
- Wastewater control
- Water quality control
- Analysis of food and beverages
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

0,4 > 35.000mg/L

pH range

1 > 12

Main interferences

Trace of Ag, S o Hg. To avoid I- and CN- At less degree OH- ($10^{-4.5}$) and Cl- ($10^{-2.7}$)



imacimus 2 SERIES

Include:

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- 1x Software for Windows (free download)
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- 1x Single ION PROBE. Holder for up 1 Mini ISE.
- 1x Mini Magnesium Electrode
- 1x Reference electrode/pH
- 1x Calibration Standard 10 mg/L 100mL
- 1x Calibration Standard 100 mg/L 100mL
- 1x Calibration Standard 1000 mg/L 100mL
- 1x Buffers pH4 (50 ml)
- 1x Buffers pH7 (50 ml)
- 1x User manual

CHLORIDE ISE SERIE

- Determine salinity and concentration levels in ocean salt water
- Aquariums
- Salt in food samples
- Clinical analysis
- Plant tissue
- Analysis of food and beverages
- Agriculture
- Mining and processing of petroleum



ISE range

1,3 > 35.000mg/L

pH range

2 > 12

Main interferences

Iodide ions irreversibly damage the membrane.
Will not give reliable readings if more than a trace of Ag or S ions are present in the solution.

COPPER ISE SERIE

- Measurement of the cuprite concentration
- Aqueous and galvanic media
- Analysis or measurement of complex metric titrations
- Determination of other ions such as calcium, magnesium and cobalt
- Environmental control
- Clinical analysis
- Analysis of food and beverages
- Agriculture



ISE range

1 > 3.000 mg/L

pH range

2 > 7

Main interferences

Unreliable results in presence of Ag, S or H. Br and Cl ions will interfere if their concentration is comparable to copper ions

FLUORIDE ISE SERIE

- Control of industrial wastewater
- Semiconductor industry
- Electroplating
- Environmental control
- Clinical analysis
- Analysis of food and beverages
- Agriculture
- Fluoridation of drinking water



ISE range

1 > 1.900mg/L

pH range

4 > 8

Main interferences

Only hydroxide ion (OH⁻) affects to the fluoride measurement. To eliminate this interference, pH must be kept below 8. Due to the high complexation of F ions in real samples, a special TISAB must be used.



imacimus 2 SERIES

Include:

- 1x Dual Channel ION/ mV/ pH / ANALIZER for PC
- 1x Software for Windows (free download)
- 1x USB cable for data/power
- 1x Single ION PROBE. Holder for up 1 Mini ISE.
- 1x Mini Magnesium Electrode
- 1x Reference electrode/pH
- 1x Calibration Standard 10 mg/L 100mL
- 1x Calibration Standard 100 mg/L 100mL
- 1x Calibration Standard 1000 mg/L 100mL
- 1x Buffers pH4 (50 ml)
- 1x Buffers pH7 (50 ml)
- 1x User manual

IODIDE ISE SERIE

- Plants
- Pharmaceutical uses
- Environmental control
- Analysis of food and beverages
- Agriculture
- Mining and processing of petroleum
- Clinical analysis
- Food emulsions such as salt or milk



ISE range

0,1 > 10.000mg/L

pH range

2 > 12

Main interferences

Trace of Ag, S o Hg. To avoid CN-
In less significance Br 10^{-3,4} y Cl-10⁻⁶

LITHIUM ISE SERIE

- Batteries
- Ceramic glass
- Lubricating greases
- Air conditioning
- Clinical analysis
- Analysis of food and beverages
- Agriculture
- Mining and processing of petroleum



ISE range

0,1 > 5.000mg/L

pH range

2 > 12

Main interferences

K (Li+, Na+)=10^{-2,3} / K(Li+, K+)=10^{-2,4} K
(Li+, H+)= 10^{-3,0}

MAGNESSIUM ISE SERIE

- Drinking water
- Mineral water and seawater
- Nutrient meter in El Salvador
- Water hardness
- Mineral deposits
- Technical and medical applications
- Drilling sludge
- Mining



ISE range

2,4 > 2.400mg/L

pH range

3 > 8,5

Main interferences

K (Mg²⁺, K+)=10^{-3,6} ; K (Mg²⁺, Ca²⁺)= 10^{-1,0}



imacimus 2 SERIES

NITRITE ISE SERIE

- Analysis of samples in the field
- Analysis of samples in laboratory
- Monitoring of human health
- Monitoring the health of fish
- Ecological monitoring
- Monitoring of the oxygen supply
- Monitoring of circulatory disturbances
- Monitoring the risk of cancer



ISE range

0,5 > 1.000mg/L

pH range

4 > 8

Main interferences

 $K(NO_2^-, SCN^-) = 10^{-0.2}$, $K(NO_2^-, ClO_4^-) = 10^{-2.4}$
 $K(NO_2^-, I^-) = 10^{-2.2}$, $K(NO_2^-, Br^-) = 10^{-3.3}$

PERCHLORATE ISE SERIE

- Analysis of samples in the field
- Analysis of samples in laboratory
- Standard extraction of DNA
- Support for hybridization reactions in molecular biology
- Oxidation of metal alloys
- Herbicide production



ISE range

0,1 > 10.000mg/L

pH range

1 > 11

Main interferences

 $K(ClO_4^-, SCN^-) = 10^{-1.7}$, $K(ClO_4^-, I^-) = 10^{-1.7}$
 $K(ClO_4^-, NO_3^-) = 10^{-1.7}$

NTsensors

PROFESSIONAL ISE SOLUTIONS

Select your ion selective electrode

(NH₄⁺) Ammonium
 (NO₂⁻) Nitrite
 (NO₃⁻) Nitrate
 (Br⁻) Bromide
 (I⁻) Iodide
 (Na⁺) Sodium
 (Mg²⁺) Magnesium

(Ca²⁺) Calcium
 (Cl⁻) Chloride
 (Cu²⁺) Copper
 (F⁻) Fluoride
 (K⁺) Potassium
 (Li⁺) Lithium

NT SENSORS IMACIMUS 5 KIT



Modular system,
select your ions!



imacimus 5

60 JUST IN SECONDS

Simultaneous measurement of 4 ion + pH

Channels	5
Measuring range	1 to >10.000 mg/L
Resolution	0,01 pH / de 0 a 1.0 ppm : 0.1 ppm de 0 a 9999 ppm : 1ppm
Minimum sample	15mL

4 Modular Ion customizable

Individual calibration up to 5 points
GLP
Customize your own standards
mV reading
Online mV or Concentration monitoring
Data in *csv or Excel files

NT SENSORS

IMACIMUS 10 KIT

Ca²⁺

Cl⁻

K⁺

Na⁺

NH₄⁺

NO₃⁻

Mg²⁺

pH

EC

WH



imacimus 10

60 JUST IN SECONDS

Simultaneous measurement of 4 ion + pH

Channels	5	Up to 7 Modular ION Individual calibration up to 5 points GLP Customize your own standards mV reading Online mV or Concentration monitoring Data in *csv or Excel files Water Hardness and Theoretical CE display
Measuring range	1 to >10.000 mg/L	
Resolution	0,01 pH / de 0 a 1.0 ppm : 0.1 ppm de 0 a 9999 ppm : 1ppm	
Minimum sample	15mL	

NT SENSORS

AUTOMATIC MULTI-ION ANALYZER



AMIC7 MULTI-ION AUTOMATIC PROFESIONAL ION CONTROL

INLINE MEASUREMENT
SELF-HEALING
SELF-CLEANING
REPRODUCIBILITY
REPEATABILITY
MONITORING
REAL-TIME DATA
PLUG & PLAY





AMIC7 MULTI-ION SERIES

NANOTECHNOLOGY SENSOR

AMIC7 is based on an electrochemical technique with which a wide range of measurements is obtained.

EASY INSTALLATION

✓ **AMIC7** allows installation on wall or table. The sample is sent to a measuring cell through a pumping system.

CONNECTIVITY

✓ **AMIC7** allows different types of communication such as USB, UART and 4-20 mA to connect process signals to a data logger, PLC or computer.

PRECISE AND AUTOMATIC

✓ **AMIC7** measures nitrate concentration automatically without human intervention.

✓ **AMIC7** increases reproducibility and ensures accurate results at all times.

✓ **AMIC7** monitors continuously and at regular intervals.

✓ **AMIC7** analyses the sample directly and without reagents.

✓ **AMIC7** is not affected by turbidity or color of the sample.

NTsensors
PROFESSIONAL
ISE
SOLUTIONS

INLINE MEASUREMENT
AUTO-CALIBRATION
SELF-CLEANING
REPRODUCIBILITY
REPEATABILITY
MONITORING
REAL-TIME DATA
PLUG & PLAY

HOW DOES IT WORK?

AMIC7 is measuring instrument has a measuring cell, where the **liquid sample is read** using a pumping system.

Once the sample reaches the electrode, **the ISE sensor detects the ions** present in the sample..

To ensure accuracy of measurements, **liquid calibration standards are used that have a known concentration** of the parameter/ISE to use.

Calibration **standards are automatically added** to the system by using a system of relays, pumps and solenoid valves, which are responsible for **supplying the right amount to the system at the right time**.

The equipment has an **automatic cleaning system**. This ensures that the equipment is maintained in **optimum condition for accurate measurements**.

Finally, the **output of data** sends the results to other devices that can display it on a screen or use it to control some process.

NTsensors

PROFESSIONAL
ISE
SOLUTIONS

INLINE MEASUREMENT
AUTO-CALIBRATION
SELF-CLEANING
REPRODUCIBILITY
REPEATABILITY
MONITORING
REAL-TIME DATA
PLUG & PLAY

FEATURES

MAIN FEATURES

AMIC7 MULTI-ION

Features	MULTI-ION— 7 ION
Outputs	Digital: USB / UART
Automatic operations	Calibration, measurement and cleaning.
Maximum pressure	1 bar
Connections to the sample	¼ and/ or ½ inch
Connections to the sample	10 - 35 °C
Sample points	1
Frequency of sampling (min)	1 sample/ 24h
Frequency of sampling (Max)	48 samples/ 24h
Power supply	85V AC > 240V AC
Consumption	12V 2A DC
Type of measurement	Electrochemical measurement
Electrodes available	Ca ²⁺ Cl ⁻ K ⁺ Na ⁺ NH ₄ ⁺ NO ₃ ⁻ Mg pH
Volume min. of sample	~100mL
Data outputs	mg/L - ppm
Measuring range	1 to 10.000 mg/L
Technique	Ion selective electrodes
Dimensions	300 x 400 x 180 mm
Protection rating	IP66

NTsensors

PROFESSIONAL

ISE

SOLUTIONS

INLINE MEASUREMENT
 AUTO-CALIBRATION
 SELF-CLEANING
 REPRODUCIBILITY
 REPEATABILITY
 MONITORING
 REAL-TIME DATA
 PLUG & PLAY



ES France - Département Bio-tests & Industries
127 rue de Buzenval BP 26 - 92380 Garches

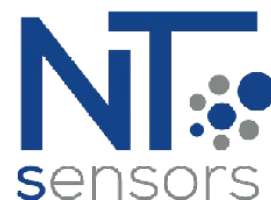


Tél. 01 47 95 99 90
Fax. 01 47 01 16 22



e-mail : bio@es-france.com
Site Web : www.es-france.com

AUTOMATIC SINGLE-ION ANALYZER



AMIC7 SINGLE-ION
**AUTOMATIC
PROFESIONAL
ION CONTROL**

INLINE MEASUREMENT
AUTO-CALIBRATION
SELF-CLEANING
REPRODUCIBILITY
REPEATABILITY
MONITORING
REAL-TIME DATA
PLUG & PLAY

AUTOMATIC ION CONTROL SERIES

NITRATE ISE SERIE

- Studies of water quality
- Analysis of soil nutrient extracts
- Soil and plant tissue analysis
- Food analysis
- Monitoring of discharged water from factories
- Wastewater monitoring
- Environmental monitoring
- Groundwater and surface water monitoring



ISE range

1 > 10.000 mg/L

pH range

2 > 11

Main interferences

 $K(NO_3^-, Br^-) = 10^{-1.5}$, $K(NO_3^-, NO_2^-) = 10^{-1.7}$
 $K(NO_3^-, OH^-) = 10^{-1.8}$, $K(NO_3^-, CH_3COO^-) = 10^{-2.2}$

AMMONIUM ISE SERIE

- Environmental, agricultural and industrial monitoring
- Measurement in drinking water, tap and sewage
- Aeration tanks
- Ammonium decomposition
- Optimization of the treatment process
- Ammonium determination
- Direct measurement
- Compensation of cross sensitivities



ISE range

1 > 10.000 mg/L

pH range

4 > 8.5

Main interferences

 $K(NH_4^+, K^+) = 10^{-1.0}$, $K(NH_4^+ + Ca^{2+}) = 10^{-4.0}$
 $K(NH_4^+ + Na^+) = 10^{-2.9}$, $K(NH_4^+, Mg^{2+}) = 10^{-3.2}$

SODIUM ISE SERIE

- Sewage
- Drinking water
- Water quality
- Environmental control
- Mining and processing of petroleum
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

1 > 10.000 mg/L

pH range

1 > 9

Main interferences

 $K(Na^+, Li^+) = 10^{-3.2}$, $K(Na^+, K^+) = 10^{-2.5}$
 $K(Na^+, Ca^{2+}) = 10^{-4.0}$


AUTOMATIC ION CONTROL SERIES

CALCIUM ISE SERIE

- Systems of softening of water
- Drinking water and mineral waters
- Analysis of soils and nutrients
- Blood electrolytes/ clinical analysis
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

1 > 10.000 mg/L

pH range

3,5 > 8

Main interferences

 $KCa^{2+} H^{+} = 10^{-2.9} / KCa^{2+} Na^{+} = 10^{-3.7}$
 $KCa^{2+} K^{+} = 10^{-3.6} / KCa^{2+} NH_4^{+} = 10^{-3.0}$

POTASSIUM ISE SERIE

- Agriculture
- Analysis of soils and nutrients
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control
- Ground detection
- Precision farming



ISE range

1 > 10.000 mg/L

pH range

1 > 9

Main interferences

 $K (K^{+}, NH_4^{+}) = 10^{-2.1} ; K (K^{+}, Li^{+}) = 10^{-4.3}$
 $K (K^{+}, Na^{+}) = 10^{-4.6} K (K^{+}, Ca^{2+}) = 10^{-3.9}$

BROMIDE ISE SERIE

- Pharmaceutical industry
- Wastewater control
- Water quality control
- Analysis of food and beverages
- Environmental control
- Inspection of incoming materials
- Quality control
- Effluent control



ISE range

1 > 10.000 mg/L

pH range

1 > 12

Main interferences

Trace of Ag, S o Hg. To avoid I- and CN- At less degree OH- ($10^{-4.5}$) and Cl- ($10^{-2.7}$)

AUTOMATIC ION CONTROL SERIES

CHLORIDE ISE SERIE

- Determine salinity and concentration levels in ocean salt water
- Aquariums
- Salt in food samples
- Clinical analysis
- Plant tissue
- Analysis of food and beverages
- Agriculture
- Mining and processing of petroleum



ISE range

1 > 10.000 mg/L

pH range

2 > 12

Main interferences

Iodide ions irreversibly damage the membrane.
Will not give reliable readings if more than a trace of Ag or S ions are present in the solution.

PERCHLORATE ISE SERIE

- Analysis of samples in the field
- Analysis of samples in laboratory
- Standard extraction of DNA
- Support for hybridization reactions in molecular biology
- Oxidation of metal alloys
- Herbicide production



ISE range

1 > 10.000 mg/L

pH range

1 > 11

Main interferences

K (ClO₄⁻, SCN⁻)= 10^{-1.7}, K (ClO₄⁻, I⁻)= 10^{-1.7}
K (ClO₄⁻, NO₃⁻)= 10^{-1.7}

MAGNESSIUM ISE SERIE

- Mining
- Drinking water
- Mineral water and seawater
- Nutrient meter in El Salvador
- Water hardness
- Mineral deposits
- Technical and medical applications
- drilling sludge



ISE range

1 > 10.000 mg/L

pH range

3 > 8,5

Main interferences

K (Mg²⁺, K⁺)=10^{-3.6} ; K (Mg²⁺, Ca²⁺)= 10^{-1.0}



AUTOMATIC ION CONTROL SERIES

IODIDE ISE SERIE

- Plants
- Pharmaceutical uses
- Environmental control
- Analysis of food and beverages
- Agriculture
- Mining and processing of petroleum
- Clinical analysis
- Food emulsions such as salt or milk



ISE range

1 > 10.000 mg/L

pH range

2 > 12

Main interferences

Trace of Ag, S o Hg. To avoid CN-
In less significance Br 10^{-3,4} y Cl-10⁻⁶

LITHIUM ISE SERIE

- Batteries
- Ceramic glass



ISE range

1 > 10.000 mg/L

pH range

2 > 12

Main interferences

K (Li+, Na+)=10^{-2,3} / K(Li+, K+)=10^{-2,4} K
(Li+, H+)= 10^{-3,0}

NTsensors

PROFESSIONAL

ISE

SOLUTIONS

MEDICIÓN EN LÍNEA
AUTOCALIBRACIÓN
AUTOLIMPIEZA
REPRODUCIBILIDAD
REPETIBILIDAD
MONITOREO
DATOS EN TIEMPO REAL
PLUG & PLAY



NT Sensors

AUTOMATIC MULTI ION ANALYZER

MAIN FEATURES

AMIC7 Single Ion

Features	Unique parameter - 1 ION
Output signals	Digital: USB / UART Analog: 4-20mA
Automatic operations	Calibration, measurement and cleaning
Maximum pressure	1 bar
Connections tthe sample	¼ and ½ Inch
Sample temperature	10 - 35 °C
Sample points	1
Frequency of sampling (min)	1 sample/ 24h
Frequency of sampling (Max)	48 sample s/ 24h
Power supply	85V AC > 240V AC
Consumption	12V 2A DC
Type of measurement	Electrochemical measurement
Electrodes available	Ca2+ Cl- K+ Na+ NH4+ NO3- Mg pH
Volume min. of sample	~100mL
Output measures	mg/L - ppm
Measuring range	1 a 10.000 mg/L
Technique	Ion selective electrodes
Dimensions	300 x 400 x 180 mm
Degree of protection	IP66

AMIC7

AUTOMATIC

PROFESIONAL

ION CONTROL

MEDICIÓN EN LÍNEA
AUTOCALIBRACIÓN
AUTOLIMPIEZA
REPRODUCIBILIDAD
REPETIBILIDAD
MONITORE
DATOS EN TIEMPO REAL
PLUG & PLAY



K-Vi

Imacimus SERIES

k-Vi**POTASSIUM (K⁺) ANALYSIS
IN WINE AND GRAPE JUICE SAMPLES****Why is important to measure potassium content in wines**

Potassium is able to form a union with tartaric acid, forming potassium bitartrate. When reaching a certain concentration of potassium bitartrate it is possible that it precipitates, which leads to a decrease in total acidity and an increase in the pH of the wine. All this has a negative effect on the organoleptic properties of the final product.



K-Vi is the **fastest and most accurate** tool in the market for **simultaneous measurement of potassium and pH in wine**, based on the exclusive patented NT Sensors technology of carbon nanotubes.

- No reagents
- No cooling treatments
- Accurate and direct measurement of potassium content in sample

The most commonly used for controlling the precipitation such as potassium bitartrate and its technique is the measurement of the electrical conductivity.

This technique measures the total ion content in an aqueous sample, not be able to distinguish each type of ion, leading to low reliability measures. Analysis system K-Vi allows direct measurement of the exact amount of potassium, thereby resulting in a faster and more reliable analysis.

The K-Vi system is based on selective electrode potentiometric technique, simple and efficient, capable of performing analysis in just a few seconds with a quick calibration and pH measurement technique.



NT SENSORS

No.03

PRODUCT LISTING

ISE ANALYTICAL SOLUTIONS

Electrochemical Solutions
for Ion Measurement.

Experts on innovative
analytical instrumentation for
a multitude of industries.



PRODUCT LIST

ANALYSER

SKU	DESCRIPTION	TYPE
IC2-KIT	IMACIMUS 2: Simultaneous Analyser ION & pH Dual Channel ION/ mV/ pH METER for use with PC/Laptop Software for Windows (free download) Usb cable for data/power Single ION PROBE. Ref. B121-U5 For up 1 Mini 4.6 ISE. Without electrode Reference electrode/pH pH buffers 4/7 (2x55ml)	IMACIMUS 2
CALCIUM SERIES PRO1073-Ca2	• 1x Dual Channel ION/ mV/ pH / CALCIUM METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Calcium Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Calcium 100mL • 1x Calibration Standard 100 mg/L Calcium 100mL • 1x Calibration Standard 1000 mg/L Calcium 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2
CHLORIDE SERIES PRO1073-CL	• 1x Dual Channel ION/ mV/ pH / CHLORIDE METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Chloride Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Chloride 100mL • 1x Calibration Standard 100 mg/L Chloride 100mL • 1x Calibration Standard 1000 mg/L Chloride 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2
POTASSIUM SERIES PRO1073-K	• 1x Dual Channel ION/ mV/ pH / POTASSIUM METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Potassium Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Potassium 100mL • 1x Calibration Standard 100 mg/L Potassium 100mL • 1x Calibration Standard 1000 mg/L Potassium 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2
LITHIUM SERIES PRO1073-LI	• 1x Dual Channel ION/ mV/ pH / LITHIUM METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Lithium Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Lithium 100mL • 1x Calibration Standard 100 mg/L Lithium 100mL • 1x Calibration Standard 1000 mg/L Lithium 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2

www.ntsensors.com



ES France - Département Bio-tests & Industries
127 rue de Buzenval BP 26 - 92380 Garches



Tél. 01 47 95 99 90
Fax. 01 47 01 16 22



e-mail : bio@es-france.com
Site Web : www.es-france.com

PRODUCT LIST

ANALYSER

SKU	DESCRIPTION	TYPE
MAGNESIUM SERIES PRO1073-MG2	• 1x Dual Channel ION/ mV/ pH / MAGNESIUM METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Magnesium Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Magnesium 100mL • 1x Calibration Standard 100 mg/L Magnesium 100mL • 1x Calibration Standard 1000 mg/L Magnesium 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2
SODIUM SERIES PRO1073-Na	• 1x Dual Channel ION/ mV/ pH / SODIUM METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Magnesium Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Sodium 100mL • 1x Calibration Standard 100 mg/L Sodium 100mL • 1x Calibration Standard 1000 mg/L Sodium 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2
AMMONIUM SERIES PRO1073-NH4	• 1x Dual Channel ION/ mV/ pH / AMMONIUM METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Ammonium Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Ammonium 100mL • 1x Calibration Standard 100 mg/L Ammonium 100mL • 1x Calibration Standard 1000 mg/L Ammonium 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2
NITRITE SERIES PRO1073-NO2	• 1x Dual Channel ION/ mV/ pH / NITRITE METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Nitrite Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Nitrite 100mL • 1x Calibration Standard 100 mg/L Nitrite 100mL • 1x Calibration Standard 1000 mg/L Nitrite 100mL • 1x Buffers pH4 (50 ml) • 1x Buffers pH7 (50 ml) • 1x User manual	IMACIMUS 2
NITRATE SERIES PRO1073-NO3	• 1x Dual Channel ION/ mV/ pH / NITRATE METER for use with PC/Laptop. • 1x Software for Windows (free download) • 1x USB cable for data/power • 1x Single ION PROBE. Holder for up 1 Mini ISE. • 1x Mini Nitrate Electrode • 1x Reference electrode/pH • 1x Calibration Standard 10 mg/L Nitrate 100mL • 1x Calibration Standard 100 mg/L Nitrate 100mL • 1x Calibration Standard 1000 mg/L Nitrate 100mL • 1x Buffers pH4 (50 ml)	IMACIMUS 2



PRODUCT LIST

ANALYSER

SKU	DESCRIPTION	TYPE
IMACIMUS 5	IMACIMUS 5: Medidor MultiION y pH Sonda Multi ION para 4 lones (electrodos no incluidos) Ionómetro Multi-paramétrico IX5 Cable USB conexión PC/Tablet (datos y alimentación) Software IMACIMUS para Windows (descarga gratuita en la Web) Electrodo de pH+referencia Tampones de pH 4 y 7 (2x 55 mL) Maletín de soporte para calibración y medida Maleta transporte	IMACIMUS 5
IMACIMUS 10	IMACIMUS 10: Medidor MultiION y pH Sonda Multi ION para 7 lones (electrodos no incluidos) Ionómetro Multi-paramétrico IC10 Cable USB conexión PC/Tablet (datos y alimentación) Software IMACIMUS para Windows (descarga gratuita en la Web) Electrodo de pH+referencia Tampones de pH 4 y 7 (2x 55 mL) Maletín de soporte para calibración y medida Maleta transporte	IMACIMUS 10
IMACIMUS 10 KIT	IMACIMUS 10 Medidor MultiION y pH con accesorios: Electrodo(Ca ²⁺) Calcio, para IMACIMUS Electrodo(Cl ⁻) Cloruro, para IMACIMUS Electrodo(K ⁺) Potasio, para IMACIMUS Electrodo(NO ₃ ⁻) Nitrato, para IMACIMUS Electrodo(Mg ²⁺) Magnesio, para IMACIMUS Electrodo(Na ⁺) Sodio, para IMACIMUS Electrodo(NH ₄ ⁺) Amonio, para IMACIMUS Solutions Calibration Multi ION P1,P2,P3 (3X125 ml.) Solution Conditioning for Multi ION (1X125 ml.)	IMACIMUS 10
ARDK02	KIT for Ion analysis for PARTNER & DEVELOP Arduino Board. Includes: Multi ION probe (without electrode) for up to 7 electrodes. SKU IC-B257 pH Electrode. SKU EPH02 Meter for Arduino Board. SKU IC-ARD8 Instructions and *ino code	PARTNER & DEVELOP



PRODUCT LIST

NANO ELECTRODES

SKU	DESCRIPTION	TYPE
M001	Nano ISE for pH	Nano ION Electrode
M007	Nano ISE for (Li+) Lithium	Nano ION Electrode
M018	Nano ISE for (NH4+) Ammonium	Nano ION Electrode
M019	Nano ISE for (F-) Fluoride	Nano ION Electrode
M023	Nano ISE for (Na+) Sodium	Nano ION Electrode
M024	Nano ISE for (Mg2+) Magnesium	Nano ION Electrode
M035	Nano ISE for (Cl-) Chloride	Nano ION Electrode
M039	Nano ISE for (K+) Potassium	Nano ION Electrode
M040	Nano ISE for (Ca2+) Calcium	Nano ION Electrode
M046	Nano ISE for (NO2-) Nitrite	Nano ION Electrode
M001	Nano ISE for pH	Nano ION Electrode
M007	Nano ISE for (Li+) Lithium	Nano ION Electrode
M018	Nano ISE for (NH4+) Ammonium	Nano ION Electrode
M019	Nano ISE for (F-) Fluoride	Nano ION Electrode
M062	Nano ISE for (NO3-) Nitrate	Nano ION Electrode
M080	Nano ISE for (Br-) Bromide	Nano ION Electrode
M099	Nano ISE for (ClO4-) Perchlorate	Nano ION Electrode
M127	Nano ISE for (I-) Iodide	Nano ION Electrode
M062	Nano ISE for (NO3-) Nitrate	Nano ION Electrode
MRX11	Nano Reference Electrode	Mini Ion Minuaturized ELECTRODE



PRODUCT LIST

MINI ELECTRODES

SKU	DESCRIPTION	TYPE
MD001	Mini 4.6 ISE for pH	Modular ION Electrode
MD007	Mini 4.6 ISE for (Li+) Lithium	Modular ION Electrode
MD018	Mini 4.6 ISE for (NH4+) Ammonium	Modular ION Electrode
MD019	Mini 4.6 ISE for (F-) Fluoride	Modular ION Electrode
MD023	Mini 4.6 ISE for (Na+) Sodium	Modular ION Electrode
MD024	Mini 4.6 ISE for (Mg2+) Magnesium	Modular ION Electrode
MD035	Mini 4.6 ISE for (Cl-) Chloride	Modular ION Electrode
MD039	Mini 4.6 ISE for (K+) Potassium	Modular ION Electrode
MD040	Mini 4.6 ISE for (Ca2+) Calcium	Modular ION Electrode
MD046	Mini 4.6 ISE for (NO2-) Nitrite	Modular ION Electrode
MD062	Mini 4.6 ISE for (NO3-) Nitrate	Modular ION Electrode
MD063	Mini 4.6 ISE for (Cu2+) Copper	Modular ION Electrode
MD080	Mini 4.6 ISE for (Br-) Bromide	Modular ION Electrode
MD099	Mini 4.6 ISE for (ClO4-) Perchlorate	Modular ION Electrode
MD127	Mini 4.6 ISE for (I-) Iodide	Modular ION Electrode
MDRX11	Mini 4.6 Reference Electrode	Modular ION Electrode



PRODUCT LIST

PROBEs

SKU	DESCRIPTION	TYPE
B121-C1H-1m	Single ION Probe, 1m cable, BNC connector. Without Electrode.	SINGLE ION
B121-C1H-1m	Single ION Probe, 1m cable, USB connector. Without Electrode.	SINGLE ION
B121-C1H-5m	Single ION Probe, 5m cable, BNC connector. Without Electrode.	SINGLE ION
IC-B257	Multi ion Probe for up to 7 modular ISE, without electrodes, USB connector	MULTI ION
	pH/Ref Electrode, 1m cable, BNC, for IMACIMUS	SPARE PARTS
	Electrode Modular DUMMY	SPARE PARTS
	Electrode clamps	SPARE PARTS

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ES France - Département Bio-tests & Industries
127 rue de Buzenval BP 26 - 92380 Garches



Tél. 01 47 95 99 90
Fax. 01 47 01 16 22



e-mail : bio@es-france.com
Site Web : www.es-france.com

PRODUCT LIST

PROBE +ELECTRODE

SKU	DESCRIPTION	TYPE
S001	Half-cell Ion Selective Electrode for pH. Single ION Probe, 1m cable, BNC end and MD Electrode inserted.	Single ION BNC +ELECTRODE
S007	(Li+) Lithium Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S018	(NH4+) Ammonium Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S019	(F-) Fluoride Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S023	(Na+) Sodium Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S024	(Mg2+) Magnesium Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S035	(Cl-) Chloride Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S039	(K+) Potassium Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S040	(Ca2+) Calcium Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S046	(NO2-) Nitrite Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S062	(NO3-) Nitrate Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S080	(Br-) Bromide Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S099	(ClO4-) Perchlorate Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
S127	(I-) Iodide Half-cell Ion Selective Electrode. Single ION Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE
SRX11	Reference Electrode, Single REF Probe, 1m cable, BNC end and Mini Electrode inserted.	Single ION BNC +ELECTRODE

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PRODUCT LIST

STANDARD SOLUTIONS

SKU	DESCRIPTION	TYPE
Ag-SC1000P	Calibration Standard 1000 mg/L ion Silver 100mL	REAGENTS
Ag-SC100P	Calibration Standard 100 mg/L ion Silver 100mL	REAGENTS
Ag-SC10P	Calibration Standard 10 mg/L ion Silver 100mL	REAGENTS
Br-SC1000P	Calibration Standard 1000 mg/L ion Bromide 100mL	REAGENTS
Br-SC100P	Calibration Standard 100 mg/L ion Bromide 100mL	REAGENTS
Br-SC10P	Calibration Standard 10 mg/L ion Bromide 100mL	REAGENTS
Ca-SC1000P	Calibration Standard 1000 mg/L ion Calcium 100mL	REAGENTS
Ca-SC100P	Calibration Standard 100 mg/L ion Calcium 100mL	REAGENTS
Ca-SC10P	Calibration Standard 10 mg/L ion Calcium 10mL	REAGENTS
CA-SC1000P-0.5L	Calibration Standard 1000 mg/L ion Calcium 500 mL	REAGENTS
ClO4-SC1000P	Calibration Standard 1000 mg/L ion Perchlorate 100mL	REAGENTS
ClO4-SC100P	Calibration Standard 100 mg/L ion Perchlorate 100mL	REAGENTS
ClO4-SC10P	Calibration Standard 10 mg/L ion Perchlorate 100mL	REAGENTS
Cl-SC1000P	Calibration Standard 1000 mg/L ion Chloride 100mL	REAGENTS
Cl-SC100P	Calibration Standard 100 mg/L ion Chloride 100mL	REAGENTS
Cl-SC10P	Calibration Standard 10 mg/L ion Chloride 100mL	REAGENTS
Cu-SC1000P	Calibration Standard 1000 mg/L ion Copper 100mL	REAGENTS
Cu-SC100P	Calibration Standard 100 mg/L ion Copper 100mL	REAGENTS
Cu-SC10P	Calibration Standard 10 mg/L ion Copper 100mL	REAGENTS
Fl-SC1000P	Calibration Standard 1000 mg/L ion Fluoride 100mL	REAGENTS
Fl-SC100P	Calibration Standard 100 mg/L ion Fluoride 100mL	REAGENTS
Fl-SC10P	Calibration Standard 10 mg/L ion Fluoride 100mL	REAGENTS
I-SC1000P	Calibration Standard 1000 mg/L ion Iodide 100mL	REAGENTS
I-SC100P	Calibration Standard 100 mg/L ion Iodide 100mL	REAGENTS
I-SC10P	Calibration Standard 10 mg/L ion Iodide 100mL	REAGENTS
K-SC1000P	Calibration Standard 1000 mg/L ion ? Potassium 100mL	REAGENTS
K-SC100P	Calibration Standard 100 mg/L ion Potassium 100mL	REAGENTS
K-SC10P	Calibration Standard 10 mg/L ion Potassium 100mL	REAGENTS
K-SC1000P-0.5L	Calibration Standard 1000 mg/L ion Potassium 500 mL	REAGENTS
Li-SC1000P	Calibration Standard 1000 mg/L Lithium 100mL	REAGENTS
Li-SC100P	Calibration Standard 100 mg/L Lithium 100mL	REAGENTS
Li-SC10P	Calibration Standard 10 mg/L Lithium 100mL	REAGENTS

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PRODUCT LIST

STANDARD SOLUTIONS

SKU	DESCRIPTION	TYPE
Mg-SC1000P	Calibration Standard 1000 mg/L ion Magnesium 100mL	REAGENTS
Mg-SC100P	Calibration Standard 100 mg/L ion Magnesium 100mL	REAGENTS
Mg-SC10P	Calibration Standard 10 mg/L ion Magnesium 100mL	REAGENTS
Na-SC1000P	Calibration Standard 1000 mg/L ion Sodium 100mL	REAGENTS
Na-SC100P	Calibration Standard 100 mg/L ion Sodium 100mL	REAGENTS
Na-SC10P	Calibration Standard 10 mg/L ion Sodium 100mL	REAGENTS
NH4-SC1000P	Calibration Standard 1000 mg/L Ion Ammonium 100mL	REAGENTS
NH4-SC1000P-1L	Calibration Standard 1000 mg/L Ion Ammonium 1L	REAGENTS
NH4-SC100P	Calibration Standard 100 mg/L ion Ammonium 100mL	REAGENTS
NH4-SC10P	Calibration Standard 10 mg/L ion Ammonium 100mL	REAGENTS
NH4-SC1000P-0.5L	Calibration Standard 1000 mg/L Ion Ammonium 500 mL	REAGENTS
NO2-SC1000P	Calibration Standard 1000 mg/L ion Nitrite 100mL	REAGENTS
NO2-SC100P	Calibration Standard 100 mg/L ion Nitrite 100mL	REAGENTS
NO2-SC10P	Calibration Standard 10 mg/L ion Nitrite 100mL	REAGENTS
NO3-SC1000P	Calibration Standard 1000 mg/L Nitrate 100mL	REAGENTS
NO3-SC1000P-0.5L	Calibration Standard 1000 mg/L Nitrate 500 mL	REAGENTS
NO3-SC100P	Calibration Standard 100 mg/L Nitrate 100mL	REAGENTS
NO3-SC10P	Calibration Standard 10 mg/L Nitrate 100mL	REAGENTS
NO3-SC1000P-1L	Calibration Standard 1000 mg/L Nitrate 1L	REAGENTS
NO3-SC100P-5L	Calibration Standard 100 mg/L Nitrate 5L	REAGENTS
NO3-SC10P-5L	Calibration Standard 10 mg/L Nitrate 5L	REAGENTS
NT-CAL-KVI	Calibration Standards K-VI (2x125mL)	REAGENTS
NT-CON-KVI	Conditioning Solution for K-VI (1x125mL)	REAGENTS

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PRODUCT LIST

MULTI-ION SOLUTIONS

SKU	DESCRIPTION	TYPE
HP08-125	Solutions Calibration Multi ION P1,P2,P3 (3X125 ml.)	MULTI ION
HP08-250	Solutions Calibration Multi ION P1,P2,P3 (3X250 ml.)	MULTI ION
HP08-500	Solutions Calibration Multi ION P1,P2,P3 (3X500 ml.)	MULTI ION
HP08-250-P1	Solutions Calibration Multi ION P1 (250 ml.)	MULTI ION
HP08-250-P2	Solutions Calibration Multi ION P2 (250 ml.)	MULTI ION
HP08-250-P3	Solutions Calibration Multi ION P3 (250 ml.)	MULTI ION
HP08-500-P1	Solutions Calibration Multi ION P1 (500 ml.)	MULTI ION
HP08-500-P2	Solutions Calibration Multi ION P2 (500 ml.)	MULTI ION
HP08-500-P3	Solutions Calibration Multi ION P3 (500 ml.)	MULTI ION
CON-HP08-125	Solution Conditioning for Multi ION (1X125 ml.)	MULTI ION
CON-HP08-250	Solution Conditioning for Multi ION (1X250 ml.)	MULTI ION
SAV-250	Solutions Calibration Multi ION, SAVIA P1,P2,P3 (3X250 ml.)	MULTI ION
SAV-500	Solutions Calibration Multi ION, SAVIA P1,P2,P3 (3X500 ml.)	MULTI ION
SAV-250-P1	Solutions Calibration Multi ION, SAVIA P1 (1X250 ml.)	MULTI ION
SAV-250-P2	Solutions Calibration Multi ION, SAVIA P2 (1X250 ml.)	MULTI ION
SAV-250-P3	Solutions Calibration Multi ION, SAVIA P3 (1X250 ml.)	MULTI ION
SAV-500-P1	Solutions Calibration Multi ION, SAVIA P1 (1X500 ml.)	MULTI ION
SAV-500-P3	Solutions Calibration Multi ION, SAVIA P2 (1X500 ml.)	MULTI ION
SAV-500-P3	Solutions Calibration Multi ION, SAVIA P3 (1X500 ml.)	MULTI ION

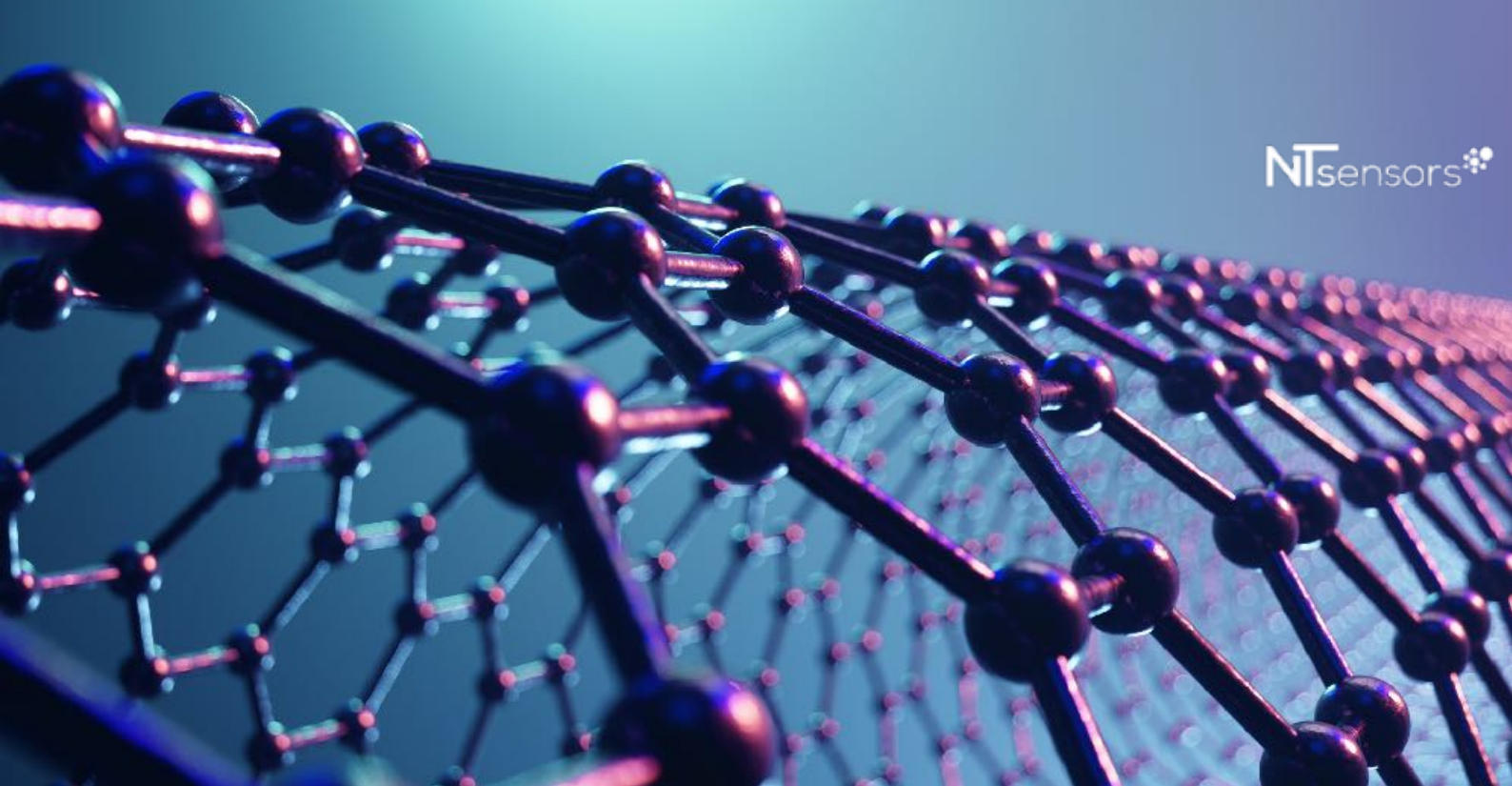
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PRODUCT LIST

OTHERs

SKU	DESCRIPTION	TYPE
PH4-250	Calibration buffer for pH 4 (1 x 250ml.)	REAGENTS
PH4-500	Dissolution buffer pH 4.01, 1x500 ml.	REAGENTS
PH55-4	pH Buffers pH 4.0 (1 x 55ml.)	REAGENTS
PH55-47	pH Buffers pH 4.0 & pH 7.0 (2 x 55ml.)	REAGENTS
PH55-7	pH Buffers pH 7.0 (1 x 55ml.)	REAGENTS
PH7-250	Calibration buffer for pH 7 (1 x 250ml.)	REAGENTS
PH7-500	Dissolution buffer pH 7, 1x500 ml. Botella autocal.	REAGENTS
PH9-250	Calibration buffer for pH 9.2 (1 x 250ml.)	REAGENTS
NH4NO3-1M	Solution of AMMONIUM NITRATE (NH4NO3) 1 mol/l. (100ml.)	REAGENTS
F-TISAB1	Buffer for fluriode ion with uncomplexing 250 ml	REAGENTS
F-TISAB2	Buffer for fluriode ion without uncomplexing 250 ml	REAGENTS
ISANO2	Buffer solution (ISAB). Special buffer BS-2. Nlrite. 1x 250mL	REAGENTS
CON-PH	Storage Solution for pH electrodes 1M KCL 1x 125mL	REAGENTS





Unless otherwise established in writing, prices set forth in NT SENSORS price lists and offers shall be deemed as expressed in Euro currency and shall be considered FCA NTSensors's premises in Tarragona, Spain (Incoterms® 2010), prices exclusive of VAT or any other applicable tax or duty.

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- Shipment: at the risk of the recipient. Insurance not included.
- NT Sensors not responsibility for damage and / or losses on shipment.

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- At any of incidence, it must be communicated in writing to the carrier and NT Sensors, within 24 hours of material receipt.

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- In the event of return, this must be communicated previously, and the acceptance limit, is 15 days after de material receipt.
- Always must be prepaid shipment and original packing shall be in perfect conditions.
- It will be not accepted returns form solutions or special customized materials

NT SENSORS, S.L

www.ntsensors.com

info@ntsensors.com

Phone: (+34) 691 119 294

(+34) 977 653 925

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