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# **LABORATORY ELECTRODES**

-  *pH Electrodes*
-  *Conductivity Cells*
-  *Calibration Buffers*

## ▶ Electrode selection table

	Gel	Polymer	Polymer TIP	Standard	Polymer Plast / 201T	Standard HA	Flat	Standard HF	Food	2 Pore Slim	2 Pore	2 Pore F	Food Slim	Semimicro	Micro	Micro P	Micro Special	Flow
Aqueous emulsions																		
Aqueous suspensions																		
Bread, Pasta																		
Brine																		
Butter																		
Cheese																		
Cosmetics																		
Cream																		
Detergents																		
Fruit juice																		
Fruits and vegetables																		
Galvanic exhaust																		
Jam																		
Leather																		
Mayonnaise																		
Meat																		
Milk																		
Paint (water-based)																		
Paint																		
Sample containing proteins																		
Sample high alkalinity																		
Sample high temperature*																		
Sample in NMR tubes																		
Sample small volume																		
Sample with Hydrofluoric Acid																		
Semi-Aqueous suspensions																		
Soap liquid																		
Soil																		
Solutions low ionic strength																		
Surfaces																		
Titration																		
Titration, non-aqueous																		
TRIS buffer																		
Viscous Samples																		
Water and sewage																		
Water, distilled																		
Water, drinking																		
Wine																		
Yoghurt																		

\* Max 100 °C for a short time

## ► Quality test certificate

XS electrodes Standard and Flow are provided with a quality certificate attesting and documents the final inspection, carried out on each single electrode. On the certificate and on the label is stated the serial number of the electrode for a correct traceability (GLP) of the calibrations and of the measurement chain.

### Electrode model

### Production batch

### Tests results

### Technical specifications

### Test date

XS sensor		QUALITY TEST REPORT	
Electrode Type: <i>Elektrodenart / Elettrodo</i>	STANDARD	Product number: <i>Produktnummer / Codice prodotto</i>	32200373
Serial number: <i>Seriennummer / Numero serie</i>	0009	Batch number: <i>Chargennummer / Numero di lotto</i>	444
Reading in pH 7 buffer (0 x 20mV)*: <i>Lesen in pH 7 / Lettura in pH 7</i>	-5 mV	Reading in pH 4 buffer (174 x 20mV)*: <i>Lesen in pH 4 / Lettura in pH 4</i>	169 mV
Measuring range: <i>Messbereich / Range di misura</i>	0...14 pH	Temperature range: <i>Temperaturbereich / Range di temperatura</i>	-10...50 °C
Temperature sensor: <i>Temperatursensor / Sensore di temperatura</i>	-	Reference electrolyte: <i>Bezugselektrolyt / Elettrolita di riferimento</i>	KCl 3M
<small>* Measurements are performed in Certified Reference Materials. * Die Messungen werden in zertifizierten Referenzmaterialien durchgeführt. * Le misurazioni sono effettuate in materiali di riferimento certificati.</small>			
<small>A change of the measurement values above during storage and use is a normal behavior of the electrochemical sensors. Eine Änderung der Messwerte oberhalb während der Lagerung und der Verwendung ist ein normales Verhalten der elektrochemischen Sensoren. Una variazione dei valori di misura di cui sopra durante l'immagazzinamento e l'uso è un comportamento normale dei sensori elettrolitici.</small>			
Passed Quality Control <i>Bestanden Qualitätskontrolle / Controllo Qualità Effettuato</i>	16/02/2018		
<small>This document is generated electronically and doesn't require any signature. Dieses Dokument ist elektronisch erzeugt und erfordert keine Unterschrift. Questo documento è generato elettronicamente e non richiede alcuna firma.</small>			



Electrode box with instruction printed on box



Indelible internal serial number

## ► XS Sensor electrodes

Very famous Swiss producer has developed a complete line of laboratory pH, Redox and conductivity electrodes, with glass and plastic body. The new XS sensor are available with S7 head or fix cable with BNC or DIN connector plug. For food application many models are equipped with temperature sensor inside, for fast temperature compensation. Some models are designed to help in daily work in GLP condition with indelible internal serial number and quality certificate.



Serial number



Blue inner buffer

Special polymer electrolyte, combined with high performance reference system, generate a complete range of electrodes for food application, in special part of this catalogue.

Blue inner buffer provides clear visual of contact with internal pH glass membrane.

All XS sensors are connectable to all common pHmeters in the market. Our customer support is available for every special application request, or support for the selection of the right electrode.

*XS sensor are the perfect solutions for pH measurements, if combined with XS pH meters and XS buffer solutions.*

## DHS Digital High Sensor

### Intelligent sensors management

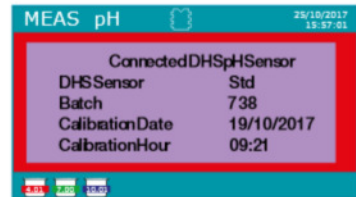
Digital High Sensors are the new pH sensors with internal chip, that store parameters, date of last calibration, model and production batch of the electrode. In the instruments with DHS function is inserted a special chip with the same technology. After connecting the pH DHS sensor to the instrument, all the data stored in the sensor chip are automatically transferred to the instrument. The display will show in a screen: DHS, sensor model, production batch, date and hour of the last calibration.

After a new calibration of the DHS electrode, the data is automatically stored in the electrode chip. If we move this electrode to another DHS-enabled instrument, we can start working immediately and with extreme security as the data from the last calibration will automatically be transferred and used for pH measurements.

New DHS pH sensors do not have an internal battery so they can be stored as a normal pH electrode and do not use special connectors but a normal BNC.

Many manufacturers using digital sensors have developed dedicated meters for these sensors. This imposes a full range of digital sensors for a variety of applications or lab requirements. Our research and development team has designed this new line of instruments to work with the new DHS digital sensors and the normal analog pH sensors both, all brands, which can be connected to the same pH meter.

*From now on, the pH measurement will be simpler.*



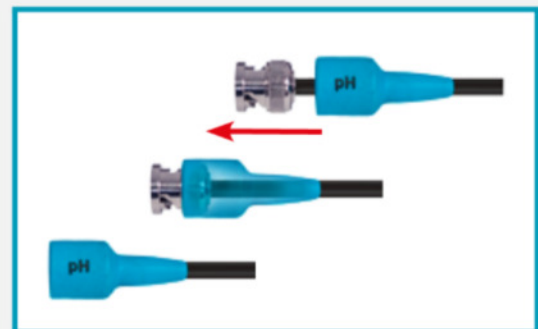
## Cables



1 m cable S7 / BNC - Code 33551733



1 m cable S7 / DIN - Code 33551743



BNC plug with plastic protection

# ► DHS DIGITAL ELECTRODES



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Model	201 T DHS	Standard T-BNC DHS	Flow Temp DHS	2 Pore T DHS	2 Pore F Temp DHS
	For portable meter	For bench meter		Food measurement application	
Code	32200103	32200123	32200133	32200113	32200143
Head	Cable fix / BNC	Cable fix / BNC	Cable fix / BNC	Cable fix / BNC	Cable fix / BNC
pH range	0...14	0...14	0...14	0...14	0...14
Temperature range	0...60 °C	-10...100 °C	-10...80 °C	0...60 °C	0...60 °C
Temperature sensor	Yes/plug RCA Cinch	Yes/plug RCA Cinch	Yes/plug RCA Cinch	Yes/plug RCA Cinch	Yes/plug RCA Cinch
Shaft material	Epoxy	Glass	Glass	Glass	POM/Glass
Diaphragm	Ceramic	Ceramic	Teflon sleeve	2 open pore	2 open pore
Reference system	Ag/AgCl	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag coated	Ag coated
Electrolyte	Gel	KCl 3M	KCl 3M	Polymer	Polymer
Shaft length	120 mm	120 mm	120 mm	95 mm / 35 mm	90 mm / 50 mm
Shaft diameter	12 mm	12 mm	12 mm	12 mm / 6 mm	12 mm / 6 mm
Note / Application	Temperature sensor NTC 30 KΩ. Maintenance free	Temperature sensor NTC 30 KΩ. With serial number and certificate. <b>General application</b>	Temperature sensor NTC 30 KΩ. With serial number and certificate. <b>Viscous sample and low ion media</b>	Temperature sensor NTC 30 KΩ. <b>For food application, meat and cheese</b>	Temperature sensor NTC 30 KΩ. <b>For food application, meat and cheese with epoxy body</b>

# ▶ GENERAL LABORATORY APPLICATION



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Model	Polymer	Polymer TIP	Gel	Standard BNC	Standard DIN
<b>Code</b>	32200223	32200443	32200203	32200263	32200273
<b>Head</b>	S7 connector	S7 connector	S7 connector	Cable fix / BNC	Cable fix / DIN
<b>pH range</b>	0...14	0...14	0...14	0...14	0...14
<b>Temperature range</b>	-10...80 °C	-10...80 °C	-10...60 °C	-10...100 °C	-10...100 °C
<b>Temperature sensor</b>	No	No	No	No	No
<b>Shaft material</b>	Glass	Glass	Glass	Glass	Glass
<b>Diaphragm</b>	Open pore	2 open pore	Ceramic	Ceramic	Ceramic
<b>Reference system</b>	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl	Ag/AgCl Cartridge	Ag/AgCl Cartridge
<b>Electrolyte</b>	Polymer	Polymer	Gel	KCl 3M	KCl 3M
<b>Shaft length</b>	120 mm	120 mm	120 mm	120 mm	120 mm
<b>Shaft diameter</b>	12 mm	12 mm	12 mm	12 mm	12 mm
<b>Note / Application</b>	Maintenance free	For pH soil measurement	Maintenance free	With serial number and certificate. General application	With serial number and certificate. General application

# ▶ GENERAL LABORATORY APPLICATION






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Model	Standard T-BNC	Standard T-DIN	Standard	Standard HA	Standard HF
Code	32200473	32200463	32200363	32200423	32200433
Head	Cable fix / BNC	Cable fix / DIN	S7 connector	S7 connector	S7 connector
pH range	0...14	0...14	0...14	0...14	0...14
Temperature range	-10...100 °C	-10...100 °C	-10...100 °C	-10...100 °C	-10...100 °C
Temperature sensor	Yes/plug RCA Cinch	Yes/spina Banana 4 mm	No	No	No
Shaft material	Glass	Glass	Glass	Glass	Glass
Diaphragm	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
Reference system	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl Cartridge
Electrolyte	KCl 3M	KCl 3M	KCl 3M	KCl 3M	KCl 3M
Shaft length	120 mm	120 mm	120 mm	120 mm	120 mm
Shaft diameter	12 mm	12 mm	12 mm	12 mm	12 mm
Note / Application	Temperature sensor NTC 30 K $\Omega$	Temperature sensor NTC 30 K $\Omega$	With serial number and certificate. General application	With serial number and certificate. Minimal alkali error	For sample with HF (0,01 M / 200 mg/l)

# ▶ GENERAL LABORATORY APPLICATION

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Model	Flat	Flow	Flow Temp BNC	Flow Temp DIN
Code	32200413	32200373	32200723	32200733
Head	S7 connector	S7 connector	Cable fix / BNC	Cable fix / DIN
pH range	0...14	0...14	0...14	0...14
Temperature range	0...60 °C	-10...80 °C	-10...80 °C	-10...80 °C
Temperature sensor	No	No	Yes/plug RCA Cinch	Yes/Banana 4 mm plug
Shaft material	Glass	Glass	Glass	Glass
Diaphragm	Teflon with 3 open pore	Teflon sleeve	Teflon sleeve	Teflon sleeve
Reference system	Ag coated	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl Cartridge
Electrolyte	Polymer	KCl 3M	KCl 3M	KCl 3M
Shaft length	120 mm	120 mm	120 mm	120 mm
Shaft diameter	12 mm	12 mm	12 mm	12 mm
Note / Application	For surface measurement e. g. paper and skin	With serial number and certificate. <b>Viscous sample and low ion media</b>	Temperature sensor NTC 30 KΩ. With serial number and certificate. <b>Viscous sample and low ion media</b>	Temperature sensor PT 1000. With serial number and certificate. <b>Viscous sample and low ion media</b>



# ▶ GENERAL LABORATORY APPLICATION



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Model	Semi Micro	Micro	Micro P	Micro Special
<b>Code</b>	<b>32200383</b>	<b>32200213</b>	<b>32200253</b>	<b>32200453</b>
<b>Head</b>	S7 connector	S7 connector	S7 connector	S7 connector
<b>pH range</b>	0...14	0...14	0...14	0...14
<b>Temperature range</b>	0...100 °C	0...100 °C	0...100 °C	0...100 °C
<b>Temperature sensor</b>	No	No	No	No
<b>Shaft material</b>	Glass	Glass	Glass	Glass
<b>Diaphragm</b>	Ceramic	Ceramic	Ceramic	Ceramic
<b>Reference system</b>	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl Cartridge
<b>Electrolyte</b>	KCl 3M	KCl 3M	Glicerina KCl	KCl 3M
<b>Shaft length</b>	150 mm / 100 mm	120 mm / 60 mm	120 mm / 60 mm	220 mm / 180 mm
<b>Shaft diameter</b>	12 mm / 6 mm	12 mm / 3 mm	12 mm / 3 mm	12 mm / 3 mm
<b>tubeNote / Application</b>	<b>Test tube measurement</b>	<b>Small volume sample &lt; 2 ml</b>	<b>Small volume sample &lt; 2 ml with protein</b>	<b>Measure in NMR tube</b>

# FOOD MEASUREMENT APPLICATION

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Model	Zavatrode	Food	Food Slim	2 Pore Steel T	2 Pore Steel T DIN	2 Pore K completo	2 Pore K senza lama
<b>Code</b>	32200403	32200393	32200243	32200313	32200643	32200303	32200343
<b>Head</b>	S7 connector	S7 connector	S7 connector	Cable fix / BNC	Cable fix / DIN	S7 connector	S7 connector
<b>pH range</b>	0...14	0...14	0...14	0...14	0...14	0...14	0...14
<b>Temperature range</b>	0...60 °C	-10...100 °C	0...100 °C	0...60 °C	0...60 °C	0...60 °C	0...60 °C
<b>Temperature sensor</b>	No	No	No	Yes/plug RCA Cinch	Yes/Banana 4 mm plug	No	No
<b>Shaft material</b>	Glass	Glass	Glass	Glass/ Polish steel	Glass/ Polish steel	Glass/ Polish steel	Glass/ Polish steel
<b>Diaphragm</b>	Ceramic	3 ceramici	2 ceramici	2 open pore	2 open pore	2 open pore	2 open pore
<b>Reference system</b>	Ag/AgCl	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag coated	Ag coated	Ag coated	Ag coated
<b>Electrolyte</b>	Glicerina KCl	Glicerina KCl	Glicerina KCl	Polymer	Polymer	Polymer	Polymer
<b>Shaft length</b>	190mm/120mm	120 mm	95 mm / 25 mm	105 mm / 50 mm	105 mm / 50 mm	110 mm / 35 mm	110 mm / 35 mm
<b>Shaft diameter</b>	12 mm / 4 mm	12 mm	12 mm / 6 mm	12 mm / 6 mm	12 mm / 6 mm	12 mm / 4,5 mm	12 mm / 4,5 mm
<b>Note / Application</b>	For cheese measure	For food and cheese application	Fore spear measure	Temperature sensor NTC 30 KΩ	Temperature sensor NTC 30 KΩ	with knife	without knife. Replaceable knife Code: 32200353

# ▶ FOOD MEASUREMENT APPLICATION



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Model	2 Pore	2 Pore Slim	2 Pore F	2 Pore F Temp BNC	2 Pore F Temp DIN	2 Pore T
<b>Code</b>	<b>32200333</b>	<b>32200283</b>	<b>32200293</b>	<b>32200703</b>	<b>32200713</b>	<b>32200323</b>
<b>Head</b>	S7 connector	S7 connector	S7 connector	Cable fix/BNC	Cable fix/DIN	Cable fix/BNC
<b>pH range</b>	0...14	0...14	0...14	0...14	0...14	0...14
<b>Temperature range</b>	0...60 °C	0...60 °C	0...60 °C	0...60 °C	0...60 °C	0...60 °C
<b>Temperature sensor</b>	No	No	No	Yes/plug RCA Cinch	Yes/Banana 4 mm plug	Yes/plug RCA Cinch
<b>Shaft material</b>	Glass	Glass	POM/Glass	POM/Glass	POM/Glass	Glass
<b>Diaphragm</b>	2 open pore	2 open pore	2 open pore	2 open pore	2 open pore	2 open pore
<b>Reference system</b>	Ag coated	Ag coated	Ag coated	Ag coated	Ag coated	Ag coated
<b>Electrolyte</b>	Polymer	Polymer	Polymer	Polymer	Polymer	Polymer
<b>Shaft length</b>	100 mm / 35 mm	100 mm / 35 mm	90 mm / 50 mm	90 mm / 50 mm	90 mm / 50 mm	95 mm / 35 mm
<b>Shaft diameter</b>	12 mm / 6 mm	12 mm / 4,5 mm	12 mm / 6 mm	12 mm / 6 mm	12 mm / 6 mm	12 mm / 6 mm
<b>Note / Application</b>	<b>For meat and cheese spear application</b>	<b>For meat and cheese spear application</b>	<b>For meat and cheese spear application</b>	Temperature sensor NTC 30 KΩ	Temperature sensor PT 1000	Temperature sensor NTC 30 KΩ

# ▶ pH PLASTIC SHAFT ELECTRODES

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Model	Polymer Plast	Polymer Plast BNC	Polymer Plast DIN	 201 T	 201 T DIN
<b>Code</b>	<b>32200493</b>	<b>32200503</b>	<b>32200513</b>	<b>50002002</b>	<b>50002042</b>
<b>Head</b>	S7 connector	Cable fix/BNC	Cable fix/DIN	Cable fix/BNC	Cable fix/DIN
<b>pH range</b>	0...14	0...14	0...14	0...14	0...14
<b>Temperature range</b>	0...60 °C	0...60 °C	0...60 °C	0...60 °C	0...60 °C
<b>Temperature sensor</b>	No	No	No	Yes/plug RCA Cinch	Yes/2 Banana 4 mm plug
<b>Shaft material</b>	Epoxy	Epoxy	Epoxy	Epoxy	Epoxy
<b>Diaphragm</b>	1 Ceramic + 1 open pore	1 Ceramic + 1 open pore	1 Ceramic + 1 open pore	Ceramic	Ceramic
<b>Reference system</b>	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl Cartridge	Ag/AgCl	Ag/AgCl
<b>Electrolyte</b>	Polymer	Polymer	Polymer	Gel	Gel
<b>Shaft length</b>	120 mm	120 mm	120 mm	120 mm	120 mm
<b>Shaft diameter</b>	12 mm	12 mm	12 mm	12 mm	12 mm
<b>Note / Application</b>	Maintenance free	Maintenance free	Maintenance free	Temperature sensor NTC 30 KΩ	Temperature sensor NTC 30 KΩ

# ▶ ORP ELECTRODES



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Model	Plast ORP	Plast ORP BNC	Standard Ag	Standard ORP	Standard KF
<b>Code</b>	<b>32200663</b>	<b>32200673</b>	<b>32200483</b>	<b>32200233</b>	<b>32200523</b>
<b>Head</b>	S7 connector	Cable fix /BNC	S7 connector	S7 connector	S7 connector
<b>mV range</b>	±1000	±1000	±2000	±2000	-
<b>Temperature range</b>	0...60 °C	0...60 °C	-10...80 °C	-10...100 °C	0...80 °C
<b>Temperature sensor</b>	No	No	No	No	No
<b>Shaft material</b>	Epoxy	Epoxy	Glass	Glass	Glass
<b>Diaphragm</b>	Ceramic	Ceramic	Ceramic	3 ceramics	-
<b>Reference system</b>	Ag/AgCl double junction	Ag/AgCl double junction	Ag/AgCl Cartridge	Ag/AgCl Cartridge	-
<b>Electrolyte</b>	Gel	Gel	KNO <sub>3</sub> 1M	KCl 3M	-
<b>Shaft length</b>	120 mm	120 mm	120 mm	120 mm	120 mm
<b>Shaft diameter</b>	12 mm	12 mm	12 mm	12 mm	12 mm
<b>Note / Application</b>	Platinum pin for REDOX measurement	Platinum pin for REDOX measurement	Silver pin for argentometric titration	Platinum ring for REDOX measurement	Double platinum pin for KF e SO <sub>2</sub> titration

# ▶ CONDUCTIVITY CELLS



Model	VP 8	VP 80/1	VPT 51/01	VPT 80/10	2301 T
Code	50004062	50003352	50004012	50004072	50004002
Head	Cable fix /BNC	Cable fix /BNC	Cable fix /BNC	Cable fix /BNC	Cable fix /BNC
COND range	10 $\mu$ S...10 mS	10 $\mu$ S...100 mS	0,1 $\mu$ S...1 mS	100 $\mu$ S...200 mS	10 $\mu$ S...100 mS
Temperature range	0...80 °C	0...80 °C	0...60 °C	0...80 °C	0...60 °C
Temperature sensor	No	Yes/plug RCA Cinch	Yes/plug RCA Cinch	Yes/plug RCA Cinch	Yes/plug RCA Cinch
Shaft material	Glass	Glass	PVC/Polish steel	Glass	Epoxy
Plate	Platinum	Platinum	Steel	Platinum	2 Platinum ring
Shaft length	120 mm	120 mm	120 mm	120 mm	120 mm
Shaft diameter	12 mm	12 mm	12 mm	12 mm	12 mm
Note / Application	Cell constant C=1	Cell constant C=1 Temperature sensor NTC 30 K $\Omega$	Cell constant C=0,1 Temperature sensor NTC 30 K $\Omega$ . <b>For ultrapure water</b>	Cell constant C=10 Temperature sensor NTC 30 K $\Omega$ . <b>For sea water</b>	Cell constant C=1 Temperature sensor NTC 30 K $\Omega$ .

## ELECTROLYTE AND MAINTENANCE SOLUTIONS

Code	Package	Description
32208113	75 ml	Solution KCl 3M + AgCl
12005033	100 ml	Solution 1M LiCl in Etlicol alcohol
32208003	75 ml	Solution 3M KCl
32208013	500 ml	Solution 3M KCl
32208023	75 ml	Solution GLYCERIN-KCl
32208033	75 ml	Solution KNO <sub>3</sub> 1M for electrode STANDARD Ag
32208043	75 ml	Solution STORAGE for electrodes
32208053	500 ml	Solution STORAGE for electrodes
32208063	75 ml	Cleaning solution PROTEIN (pepsina) for electrodes Food application
32208093	250 ml	Cleaning solution PROTEIN (pepsina) for electrodes Food application
32208073	75 ml	Cleaning solution DIAPHRAGM (thiourea)
32208103	250 ml	Cleaning solution DIAPHRAGM (thiourea)



## Buffer solutions

- 250 ml and 500 ml ergonomic bottle with built-in dosing compartment and value table depending on temperature for an accurate calibration
- Economical, using just the proper amount per calibration
- Coloured for an easier identification
- Immune to micro-organisms
- Life time 24 months
- Actual value and expiration date printed on the bottle
- Actual value and expiration date reported on the certificate
- Certificates available at our website

### XS Professional with DAKKS/DKD certificate

pH BUFFERS				
Code	Package	pH value (25°C)	Accuracy	Color
51300003	250 ml	4,01	± 0,01	Red
51300013	250 ml	7,00	± 0,01	Green
51300023	250 ml	9,21	± 0,02	Blue
51300033	250 ml	10,01	± 0,02	Yellow
51300103	500 ml	4,01	± 0,01	Red
51300113	500 ml	7,00	± 0,01	Green
51300123	500 ml	9,21	± 0,02	Blue
51300133	500 ml	10,01	± 0,02	Yellow

### XS Basic with NIST certificate referred

pH BUFFERS				
Code	Package	pH value (25°C)	Accuracy	Color
51100033	250 ml	4,01	± 0,01	Red
51100043	250 ml	7,00	± 0,01	Green
51100053	250 ml	9,00	± 0,02	Blue
51100073	250 ml	9,21	± 0,02	Blue
51100063	250 ml	10,01	± 0,02	colourless
51100133	500 ml	4,01	± 0,01	Red
51100143	500 ml	7,00	± 0,01	Green
51100153	500 ml	9,00	± 0,02	Blue
51100173	500 ml	9,21	± 0,02	Blue
51100163	500 ml	10,01	± 0,02	colourless
51100233	5 l	4,01	± 0,01	Red
51100243	5 l	7,00	± 0,01	Green
51100253	5 l	9,00	± 0,02	Blue
51100273	5 l	9,21	± 0,02	Blue
51100263	5 l	10,01	± 0,02	colourless

## Conductivity Standards

- 500 ml ergonomic bottle with built-in dosing compartment and value table depending on temperature for an accurate calibration
- 1,3 and 5,0 µS/cm in 300 ml glass bottle
- Economical, using just the proper amount per calibration
- Life time 24 months
- 1,3 and 5,0 µS/cm life time minimum 12 months
- Actual value and expiration date printed on the bottle
- Actual Value and expiration date reported on the certificate
- Certificates available at our website

### XS Professional with DANAK/DFM certificate

CONDUCTIVITY STANDARD			
Code	Package	value µS/cm (20°C / 25°C)	Accuracy
51300303	300 ml	1,3	± 0.1 µS/cm
51300313	300 ml	5,0	± 0.1 µS/cm
51300323	500 ml	76 / 84	± 1%
51300333	500 ml	133 / 147	± 1%
51300343	500 ml	1278 / 1413	± 1%
51300353	500 ml	11670 / 12880	± 1%

### XS Basic with NIST certificate referred

CONDUCTIVITY STANDARD			
Code	Package	value µS/cm (20°C / 25°C)	Accuracy
51100503	300 ml	1,3	± 0.1 µS/cm
51100513	300 ml	5,0	± 0.1 µS/cm
51100613	500 ml	76 / 84	± 1%
51100623	500 ml	133 / 147	± 1%
51100633	500 ml	1278 / 1413	± 1%
51100643	500 ml	11670 / 12880	± 1%



Fill calibration compartment with simple press



Calibrate electrode



Empty calibration compartment



pH and conductivity sachet buffer solutions 25 ml with NIST certificate

### REDOX STANDARD For check ORP electrode

Code	Package	mV Value	Accuracy
51100303	250 ml	Redox/ORP 200mV/25°C	± 5mV
51100313	250 ml	Redox/ORP 475mV/25°C	± 5mV
51100323	500 ml	Redox/ORP 475mV/25°C	± 5mV

# ► Start with right solution



Giorgio Bormac Company specialist in electrochemistry has developed this new line of instruments, finding the right balance between the design, innovative ideas in pH and conductivity measurement and easy use.

*This is the First Perfect Combination.*



If you have a beautiful bench meter, but you don't combine it with a perfect pH electrode, this will be always and only a simple instrument that shows only numbers on the display and not pH measurement. Also in this case we have worked for a perfect combination.

A very famous Swiss producer has developed, only for XS instruments, a complete laboratory line of pH electrodes for every type of application.

*This is the Second Perfect Combination.*



"The calibration of pH measuring system is one of the most important factors. To ensure a high measuring accuracy one has to follow the correct calibration procedure, use new and accurate buffer solutions and wait long enough for stable indication values of the electrode assembly to be calibrated. No pH measurement can be more accurate than its calibration accuracy" (*International of basic and General Terms in Metrology*)

If you have a good electrode, but you don't calibrate it with buffer solutions with good metrological traceability, You can't obtain reliable results.

The XS buffer solutions come to celebrate the *third Perfect Combination.*

*A Perfect Combination for new emotions.*



## pH, conductivity and ORP instruments



XS ELETTRODI VER 2.0 04-18 ENG

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