



Calibration Solutions

pH - Conductivity - Redox - Dissolved Oxy-



Calibration and quality

The determination of pH, conductivity and redox potential are routine operations in most laboratories and processes. Reliability and accuracy of the measurements are critical for the quality control.

The XS Solution range suits your needs and guarantees an impeccable calibration.



Traceability and Reliability



Assurance and Accreditation



pH 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

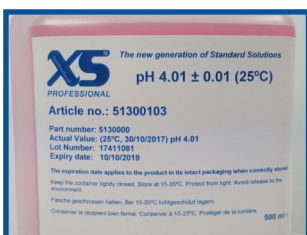
XS Professional with DAkkS/DKD certificate

pH Buffer				
Part No.	Package	pH value (25 °C)	Accuracy	Colour
51300903	4 x 75 ml	4,01	± 0,01	Red
51300913	4 x 75 ml	7,00	± 0,01	Green
51300923	4 x 75 ml	9,21	± 0,02	Blue
51300933	4 x 75 ml	10,01	± 0,02	Yellow

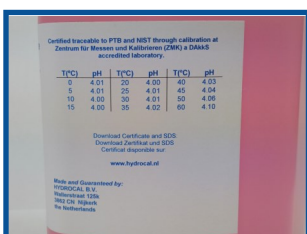
51300003	250 ml	4,01	± 0,01	Red
51300013	250 ml	7,00	± 0,01	Green
51300023	250 ml	9,21	± 0,02	Blue
51300033	250 ml	10,01	± 0,02	Yellow

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

51300203	5 liter	4,01	± 0,01	Red
51300213	5 liter	7,00	± 0,01	Green
51300223	5 liter	9,21	± 0,02	Blue
51300233	5 liter	10,01	± 0,02	Yellow



Lot number, Actual Value and expiration date reported on the bottle



Value table depending on temperature



- Immune to micro-organisms
- Actual value and expiration date printed on the bottle
- Life time 24 months
- Actual Value and expiration date reported on the certificate
- Certificates available at our website

XS Basic with NIST Traceability

pH Buffer				
Part No.	Package	pH value (25 °C)	Accuracy	Colour
32383123	75 ml	4,01	± 0,01	Red
32383133	75 ml	7,00	± 0,01	Green
32383973	75 ml	9,21	± 0,02	Blue
32383963	75 ml	10,01	± 0,02	Yellow

51190013	250 ml	1,68	± 0,01	Colourless
51100033	250 ml	4,01	± 0,01	Red
51190023	250 ml	6,86	± 0,01	Colourless
51100043	250 ml	7,00	± 0,01	Green
51100053	250 ml	9,00	± 0,02	Colourless
51190083	250 ml	9,18	± 0,02	Colourless
51100073	250 ml	9,21	± 0,02	Blue
51100063	250 ml	10,01	± 0,02	Yellow

51190113	500 ml	1,68	± 0,01	Colourless
51100133	500 ml	4,01	± 0,01	Red
51190123	500 ml	6,86	± 0,01	Colourless
51100143	500 ml	7,00	± 0,01	Green
51100153	500 ml	9,00	± 0,02	Colourless
51190183	500 ml	9,18	± 0,02	Colourless
51100173	500 ml	9,21	± 0,02	Blue
51100163	500 ml	10,01	± 0,02	Yellow

51190333	1 liter	4,01	± 0,01	Red
51190343	1 liter	7,00	± 0,01	Green
51190353	1 liter	9,00	± 0,02	Colourless
51190373	1 liter	9,21	± 0,02	Blue
51190363	1 liter	10,01	± 0,02	Yellow

51100233	5 liter	4,01	± 0,01	Red
51100243	5 liter	7,00	± 0,01	Green
51100253	5 liter	9,00	± 0,02	Colourless
51100273	5 liter	9,21	± 0,02	Blue
51100263	1 liter	10,01	± 0,02	Yellow



Conductivity standard 5 µS/cm
with DANAK/DFM certificate



Conductivity standard 5 µS/cm
with NIST traceability



With DANAK/DFM certificate



With NIST traceability

Conductivity Standard

- 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 12 months
- Actual Value and expiration date reported on the certificate
- Certificates available at our website

XS Professional with DANAK/DFM certificate

Conductivity Standard			
Part No.	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
51390923	4 x 75 ml	76 / 84	± 1 %
51390933	4 x 75 ml	133 / 147	± 1 %
51390943	4 x 75 ml	1278 / 1413	± 1 %
51390953	4 x 75 ml	11670 / 12880	± 1 %
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 traceability

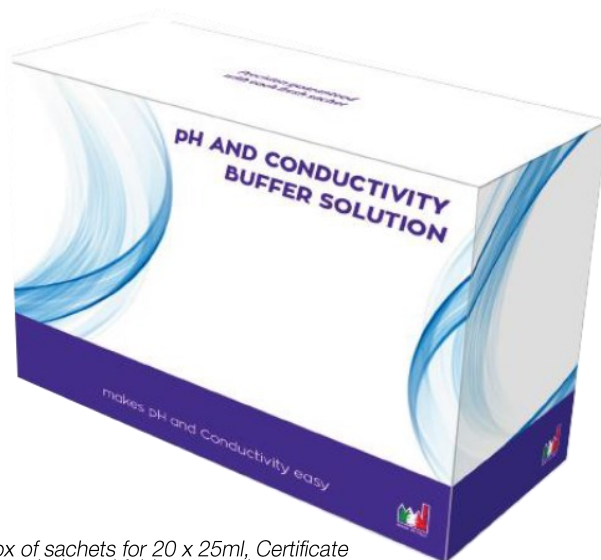
Conductivity Standard			
Part No.	Package	Value µS/cm (20°C / 25°C)	Accuracy
60000613	75 ml	76 / 84	± 1 %
60000423	75 ml	1278 / 1413	± 1 %
60000433	75 ml	11670 / 12880	± 1 %
51100503	300 ml	1,3	± 0,1 µS/cm
51100513	300 ml	5,0	± 0,1 µS/cm
51100613	500 ml	76 / 84	± 1 %
51100623	500 ml	133 / 147	± 1 %
51100633	500 ml	1278 / 1413	± 1 %
51100643	500 ml	11670 / 12880	± 1 %
51100713	5 liter	76 / 84	± 1 %
51100723	5 liter	133 / 147	± 1 %
51100733	5 liter	1278 / 1413	± 1 %
51100743	5 liter	11670 / 12880	± 1 %



Individually sealed
75ml, single use



Included fold-out stand to keep hand free during calibration



Box of sachets for 20 x 25ml, Certificate of analysis and fold-out stand



Sachets

- Life time 3 years
- Quick and easy to use
- Individual sealed protected from light
- Supplied with NIST traceable certificate

- With temperature table
- Batch, production date and expire date printed on each sachet
- Supplied with fold-out stand

XS Basic Single Sachets

XS Basic Calibration Sets

pH Buffer				
Part No.	Package	pH value (25 °C)	Accuracy	Colour
51102013	20 x 25 ml	4,01	± 0,01	Red
51102023	20 x 25 ml	7,00	± 0,01	Green
51102043	20 x 25 ml	10,01	± 0,02	Yellow

Conductivity Standard			
Part No.	Package	Value µS/cm (25°C)	Accuracy
51102053	20 x 25 ml	1413	± 1%
51102063	20 x 25 ml	12880	± 1%

Maintenance Solutions		
Part No.	Package	Content
51102083	20 x 10 ml	STORAGE Solution for pH/ORP sensors
51102093	20 x 25 ml	Distilled Water

Calibration Sets		
Part No.	Package	Content
51102203	20 x 25 ml	Set CAL pH BIS 1x20 SACHET 25ml
51102213	20 x 25 ml	Set CAL pH TRIS 1x20 SACHET 25ml
51102223	20 x 25 ml	Set CAL COND 1x20 SACHET 25ml
51102233	20 x 25 ml	Set CAL PC 1x20 SACHET 25ml
51102243	18 x 25 ml /	Set REFILL pack pH 1x20 SACHET 25ml
51102253	20 x 25 ml	Set REFILL COND 1x20 SACHET 25ml
51102263	18 x 25 ml / 2 x 10 ml	Set REFILL pack PC 1x20 SACHET 25ml (5 x pH 4.01/7.01/EC 1413µS/cm + 3 x H2O + 2 x Storage 10ml)



Redox Standard 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
- Actual value and expiration date printed on the bottle
- Life time 24 months
- Certificates available at our website

XS Basic with NIST Traceability

Redox Standard for ORP veri-cation			
Part No.	Package	mV value (25°C)	Accuracy
32383153	75 ml	Redox/ORP 475mV/25°C	± 5mV
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
51190333	500 ml	Redox/ORP 650mV/25°C	± 5mV
51100323	5 liter	Redox/ORP 650mV/25°C	± 5mV

Oxygen Standard Solutions

- 0% Oxygen standard, either as solution for easy use or in powder form for longer storage.
- 500 ml ergonomic bottle with built-in dosing compartment, economical, using just the proper amount per calibration

XS Basic Solutions

Dissolved Oxygen Standards			
Part No.	Package	Content	Value DO
50010272	5 x 75 ml	Powder for single use, 5 pcs.	0 %
50010272	75 ml	Powder for single use, 1 pcs.	0 %
50019272	75 ml	Premixed solution, 75ml	0 %
50019272	500 ml	Premixed solution, 500ml	0 %



Fill calibration compartment



Calibrate electrode



Empty calibration compartment

Storage Solutions

- 75 ml, 500 ml ergonomic bottle with built-in dosing compartment and 5 liter Cubitainer with convenient dosing valve for pH and ORP electrodes.
- Special buffered formulation to extend the life of your electrode.
- 500ml bottle and 5 ltr Cubitainer are supplied with Certificate of Analysis

Electrolyte Solutions

- 30 ml, 75 ml and 500 ml ergonomic bottle with built-in dosing Compartment for pH, ORP and DO electrodes
- Specialty electrolyte solutions for specific applications such as Food, Titrations and Non-aqueous applications.
- Available in sturdy box with 4 individually sealed 75ml bottles.



Cleaning Solutions

- 75 ml, 250ml and 500 ml ergonomic bottle with built-in dosing compartment.
- Specific cleaning solutions for different types of contaminations.
- One complete set with all cleaning solutions, 75 ml each, available in a sturdy box.



XS Storage Solutions

Storage Solution		
Part No.	Package	Content
32208043	75 ml	XS Storage solution for pH/ORP electrode
32208053	500 ml	XS Storage solution for pH/ORP electrode
32298063	5 ltr	XS Storage solution for pH/ORP electrode

XS Electrolyte Solutions

Electrolyte Solution		
Part No.	Package	Content
32208003	75 ml	3M KCl XS Sensor Electrolyte solution
32208023	75 ml	GLYCERIN-KCl XS Sensor Electrolyte solution
32208033	75 ml	1 M KNO3 XS Sensor Electrolyte solution
32298043	75 ml	1M LiCl in ethyl alcohol XS Electrolyte solution
32298203	4 x 75 ml	3M KCl XS Sensor Electrolyte solution
32298223	4 x 75 ml	GLYCERIN-KCl XS Sensor Electrolyte solution
32298333	4 x 75 ml	1 M KNO3 XS Sensor Electrolyte solution
32298243	4 x 75 ml	1M LiCl in ethyl alcohol XS Electrolyte solution
32208013	500 ml	3M KCl XS Sensor Electrolyte solution
50010262	30 ml	XS Sensor Electrolyte solution for Polarographic DO electrode

XS Cleaning Solutions

Cleaning Solution		
Part No.	Package	Content
32208063	75 ml	XS Cleaner A - PROTEIN CLEANING solution (pepsin) for XS Sensor
32208073	75 ml	XS Cleaner B - DIAPHRAGM CLEANING solution (thiourea) for XS Sensor
32208083	75 ml	XS Cleaner C - REGENERATION solution (HF) for XS Sensor
32298093	75 ml	XS Cleaner D - GENERAL CLEANING solution for XS Sensor
32298053	4 x 75 ml	Complete set of XS Cleaner solutions for XS Sensor. Incl.: Cleaner A, B, C and D
32208093	250 ml	XS Cleaner A - PROTEIN CLEANING solution (pepsin) for XS Sensor
32208103	250 ml	XS Cleaner B - DIAPHRAGM CLEANING solution (thiourea) for XS Sensor
32298113	250 ml	XS Cleaner D - GENERAL CLEANING solution for XS Sensor
32298123	500 ml	XS Cleaner A - PROTEIN CLEANING solution (pepsin) for XS Sensor
32298133	500 ml	XS Cleaner B - DIAPHRAGM CLEANING solution (thiourea) for XS Sensor
32298143	500 ml	XS Cleaner D - GENERAL CLEANING solution for XS Sensor

75 ml bottle

- For easy replacement of the bottles standard supplied with the XS instruments.
- Clear PVC bottle to visually inspect content of bottle.
- Secure cap with break-off ring for guaranteed unopened bottle.
- Option to use as “single-use” bottles for absolute guarantee of a fresh uncontaminated calibration standard.
- Available in sturdy box for 4 pcs. With different configurations* such as:

Replenishment kit: pH4.01, pH7.00, Cleaner D & Storage solution
pH4.01, pH7.00, 1413 μ S & 12.88mS
Etc.

Single-use kit: 4x pH7.00 XS Professional**
4x pH4.01 XS Basic**
Etc.

Maintenance kit: Cleaner A, B, C & D
Cleaner C, pH7.00, Storage solution & 3M KCl electrolyte.
Etc.

* Other configurations available please ask for the possibilities.

** Supplied with Certificate of Analysis

250ml, 500ml and 1 liter bottle

- Strong, leak-proof bottles made from HDPE
- Secure cap with break-off ring for guaranteed unopened bottle.
- Ergonomic “squeeze” bottle with built-in dosing compartment of 20ml/25ml.
- Solution inside the dosing compartment can’t go back inside the bottle, not possible to contaminate the bottle.
- Possible to calibrate in the dosing compartment.
- Available in boxes of 10 pc. each for easier shipping and warehouse storage.
- All certified solutions are supplied in a zip-lock bag together with Certificate of Analysis.
- Available in special configuration box of 4 bottles*, such as:

Replenishment kit: pH4.01, pH7.00, Cleaner D & Storage solution
pH4.01, pH7.00, 1413 μ S & 12.88mS
Etc.

Maintenance kit: Cleaner A, B, C & D
Cleaner C, pH7.00, Storage solution & 3M KCl electrolyte.
Etc.

*Other configurations available please ask for the possibilities.

5 liter cubitainer

- Sturdy box with leak-proof LDPE bag inside, and faucet included.
- Secure cap with break-off ring for guaranteed unopened packaging.
- Ideal for bigger user or for refilling other bottles.
- While emptying the solution the bag inside folds in so no air contamination of the solution.
- All certified solutions are supplied together with Certificate of Analysis.





Assurance and Accreditation

The measurements of pH and conductivity are much more accurate the more reliable the standards used for the calibration are. The XS Professional solutions are a guarantee of metrological traceability of your measurement chain, and are ideal for regulated areas. Traceability is ensured by the certification of accredited calibration laboratories according with UNI CEI EN ISO / IEC 17025.

The pH buffer solutions are DKD-DAkKS certified by calibration at ZMK Zentrum für Messen und Kalibrieren.

The conductivity standards are DANAK certified by calibration at DFM Danish Institute of Fundamental Metrology.

DAkKS and DANAK are accepted by other accreditation bodies within the scope of the European Cooperation for Accreditation (EA) and the International Laboratory Accreditation Cooperation (ILAC).



Members and Associates

Austria **AA**
Belgium **BELAC**
Bulgaria **BAS**
Croatia **HAA**
Czech Republic **CAI**
Denmark **DANAK**
France **COFRAC**
Germany **DAkKS**
Greece **ESYD**
Hungary **NAH**
Iceland **ISAC**
Ireland **INAB**
Italy **ACCREDIA**
Norway **NA**
Poland **PCA**

Romania **RENAR**
Serbia **ATS**
Slovakia **SNAS**
Slovenia **SA**
Spain **ENAC**
Sweden **SWEDAC**
Switzerland **SAS**
The Netherlands **RVA**
Turkey **TURKAK**
United Kingdom **UKAS**
Algeria **ALGERAC**
Egypt **EGAC**
Israel **ISRAC**
Morocco **SEMAG**
Tunisia **TUNAC**



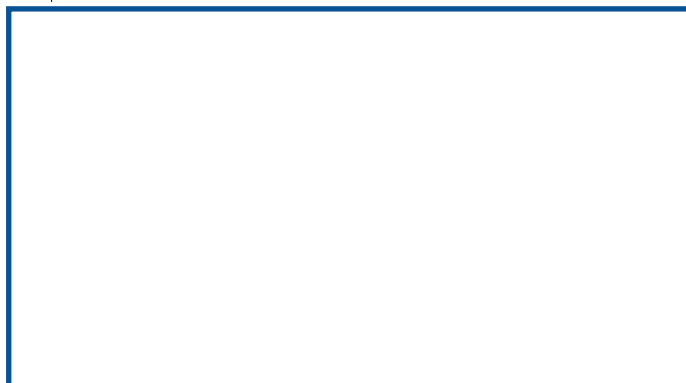
Traceability and Reliability

XS standards are traceable to the IUPAC pH scale, by an unbroken chain of comparisons directly to Standard Reference Materials manufactured by NIST and PTB.

Each solution is provided with the Certificate of Analysis of our internal Laboratory which guarantees quality, traceability and accuracy.

XS Basic solutions are your perfect partner for verification of sensors and your measurement systems.

Your professional dealer:



Certificate of Analysis

Analyse Certificate / Analysenzertifikat

Calibration Solution 1413 µS/cm (25°C)

Geleiddbaarheid kalibratie Vloeistof / Li Standard

Product Number / Artikel Nr. 51100833

Lot Number / Lot Nummer / Chargen Nr. 82142071

Expiry date / Vervaldatum / Verfallsdatum 3-4-2020

Actual value / Werkelijke waarde / Wert 1411 µS/cm

Accuracy until expiration / Nauwkeurigheid tot vervaldatum / Genauigkeit bis Verfallsdatum ± 1%

Specification / Specificatie / Spezifikation 1399 µS/cm - 1427 µS/cm (25°)

Method / Methode

The result reported above was determined by analysis of a sample of this lot taken at the time of manufacture.

The IC measurement was performed using Conductivity instrument with a 2 cell electrode calibrated to NIST and PTB traceable secondary reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

reference materials, Merck KGaA, 1.01203.0500 Lot: HC43479403

GUARANTEED BY:

