



# 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 Buffers



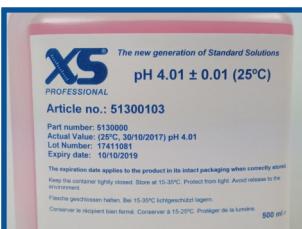
## pH Buffer Solutions

- 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

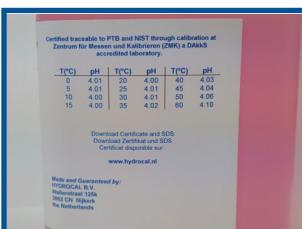
### XS Professional with DAkkS/DKD certificate

#### pH Buffer

Part No.	Package	pH value (25 °C)	Accuracy	Colour
<b>51300903</b>	4 x 75 ml	<b>4,01</b>	± 0,01	Red
<b>51300913</b>	4 x 75 ml	<b>7,00</b>	± 0,01	Green
<b>51300923</b>	4 x 75 ml	<b>9,21</b>	± 0,02	Blue
<b>51300933</b>	4 x 75 ml	<b>10,01</b>	± 0,02	Yellow
<b>51300003</b>	250 ml	<b>4,01</b>	± 0,01	Red
<b>51300013</b>	250 ml	<b>7,00</b>	± 0,01	Green
<b>51300023</b>	250 ml	<b>9,21</b>	± 0,02	Blue
<b>51300033</b>	250 ml	<b>10,01</b>	± 0,02	Yellow
<b>51300103</b>	500 ml	<b>4,01</b>	± 0,01	Red
<b>51300113</b>	500 ml	<b>7,00</b>	± 0,01	Green
<b>51300123</b>	500 ml	<b>9,21</b>	± 0,02	Blue
<b>51300133</b>	500 ml	<b>10,01</b>	± 0,02	Yellow
<b>51300203</b>	5 liter	<b>4,01</b>	± 0,01	Red
<b>51300213</b>	5 liter	<b>7,00</b>	± 0,01	Green
<b>51300223</b>	5 liter	<b>9,21</b>	± 0,02	Blue
<b>51300233</b>	5 liter	<b>10,01</b>	± 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
<b>32383123</b>	75 ml	<b>4,01</b>	± 0,01	Red
<b>32383133</b>	75 ml	<b>7,00</b>	± 0,01	Green
<b>32383973</b>	75 ml	<b>9,21</b>	± 0,02	Blue
<b>32383963</b>	75 ml	<b>10,01</b>	± 0,02	Yellow
<b>51190013</b>	250 ml	<b>1,68</b>	± 0,01	Colourless
<b>51100033</b>	250 ml	<b>4,01</b>	± 0,01	Red
<b>51190023</b>	250 ml	<b>6,86</b>	± 0,01	Colourless
<b>51100043</b>	250 ml	<b>7,00</b>	± 0,01	Green
<b>51100053</b>	250 ml	<b>9,00</b>	± 0,02	Colourless
<b>51190083</b>	250 ml	<b>9,18</b>	± 0,02	Colourless
<b>51100073</b>	250 ml	<b>9,21</b>	± 0,02	Blue
<b>51100063</b>	250 ml	<b>10,01</b>	± 0,02	Yellow
<b>51190113</b>	500 ml	<b>1,68</b>	± 0,01	Colourless
<b>51100133</b>	500 ml	<b>4,01</b>	± 0,01	Red
<b>51190123</b>	500 ml	<b>6,86</b>	± 0,01	Colourless
<b>51100143</b>	500 ml	<b>7,00</b>	± 0,01	Green
<b>51100153</b>	500 ml	<b>9,00</b>	± 0,02	Colourless
<b>51190183</b>	500 ml	<b>9,18</b>	± 0,02	Colourless
<b>51100173</b>	500 ml	<b>9,21</b>	± 0,02	Blue
<b>51100163</b>	500 ml	<b>10,01</b>	± 0,02	Yellow
<b>51190333</b>	1 liter	<b>4,01</b>	± 0,01	Red
<b>51190343</b>	1 liter	<b>7,00</b>	± 0,01	Green
<b>51190353</b>	1 liter	<b>9,00</b>	± 0,02	Colourless
<b>51190373</b>	1 liter	<b>9,21</b>	± 0,02	Blue
<b>51190363</b>	1 liter	<b>10,01</b>	± 0,02	Yellow
<b>51100233</b>	5 liter	<b>4,01</b>	± 0,01	Red
<b>51100243</b>	5 liter	<b>7,00</b>	± 0,01	Green
<b>51100253</b>	5 liter	<b>9,00</b>	± 0,02	Colourless
<b>51100273</b>	5 liter	<b>9,21</b>	± 0,02	Blue
<b>51100263</b>	1 liter	<b>10,01</b>	± 0,02	Yellow



# Conductivity Standards



Conductivity standard 5  $\mu\text{S}/\text{cm}$   
with DANAK/DFM certificate



Conductivity standard 5  $\mu\text{S}/\text{cm}$   
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  $\mu\text{S}/\text{cm}$  in 300 ml glass bottle
- Economical, using just the proper amount per calibration

- Life time 24 months
- 1,3 and 5,0  $\mu\text{S}/\text{cm}$  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 $\mu\text{S}/\text{cm}$ (20°C / 25°C)	Accuracy
51300303	300 ml	1,3	$\pm 0,1 \mu\text{S}/\text{cm}$
51300313	300 ml	5,0	$\pm 0,1 \mu\text{S}/\text{cm}$
51390923	4 x 75 ml	76 / 84	$\pm 1 \%$
51390933	4 x 75 ml	133 / 147	$\pm 1 \%$
51390943	4 x 75 ml	1278 / 1413	$\pm 1 \%$
51390953	4 x 75 ml	11670 / 12880	$\pm 1 \%$
51300323	500 ml	76 / 84	$\pm 1 \%$
51300333	500 ml	133 / 147	$\pm 1 \%$
51300343	500 ml	1278 / 1413	$\pm 1 \%$
51300353	500 ml	11670 / 12880	$\pm 1 \%$



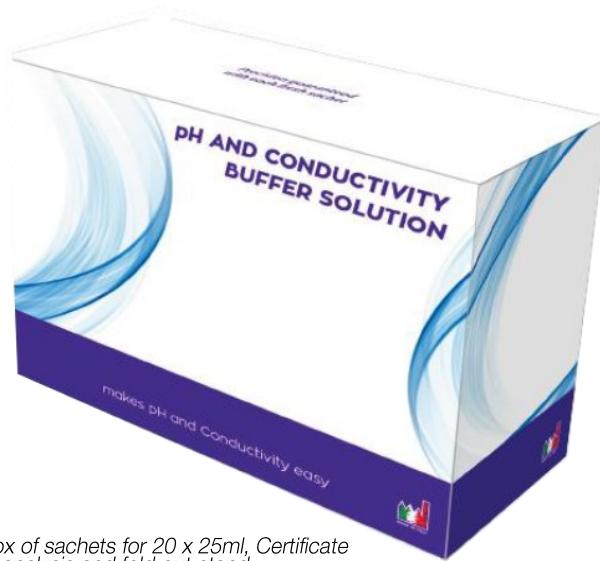
Individually sealed  
75ml, single use

## XS Basic with NIST traceability

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



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

### XS Basic Single Sachets

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

Conductivity Standard			
Part No.	Package	Value $\mu\text{S}/\text{cm}$ (25°C)	Accuracy
<b>51102053</b>	20 x 25 ml	<b>1413</b>	± 1%
<b>51102063</b>	20 x 25 ml	<b>12880</b>	± 1%

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

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

### XS Basic Calibration Sets

Calibration Sets		
Part No.	Package	Content
<b>51102203</b>	20 x 25 ml	Set CAL pH BIS 1x20 SACHET 25ml
<b>51102213</b>	20 x 25 ml	Set CAL pH TRIS 1x20 SACHET 25ml
<b>51102223</b>	20 x 25 ml	Set CAL COND 1x20 SACHET 25ml
<b>51102233</b>	20 x 25 ml	Set CAL PC 1x20 SACHET 25ml
<b>51102243</b>	18 x 25 ml /	Set REFILL pack pH 1x20 SACHET 25ml
<b>51102253</b>	20 x 25 ml	Set REFILL COND 1x20 SACHET 25ml
<b>51102263</b>	18 x 25 ml / 2 x 10 ml	Set REFILL pack PC 1x20 SACHET 25ml (5 x pH 4.01/7.01/EC 1413 $\mu\text{S}/\text{cm}$ + 3 x H <sub>2</sub> O + 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 <b>475mV</b> /25°C	± 5mV
51100303	250 ml	Redox/ORP <b>200mV</b> /25°C	± 5mV
51100313	250 ml	Redox/ORP <b>475mV</b> /25°C	± 5mV
51100323	500 ml	Redox/ORP <b>475mV</b> /25°C	± 5mV
51190333	500 ml	Redox/ORP <b>650mV</b> /25°C	± 5mV
51100323	5 liter	Redox/ORP <b>650mV</b> /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 KNO <sub>3</sub> 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 KNO <sub>3</sub> 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



# Packaging



## 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, 1413µS & 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 warehousing 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, 1413µS & 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).**



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  
Israël ISRAC  
Morocco SEMAC  
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

The new generation of Standard Solutions



### Buffer Solution pH 7.00 (25°C)

Product Number: 5130091

Lot Number: 17411581

Filling WO: 11/02/2019

Expiry date: 7.00 ± 0.01%

Nominal value at 25°C: 7.00

Determined pH value at 25°C: 7.00

Method: A report showing above was determined independently at Hydrocal and at ZMK. The agreement between the two independent measurements is imperative within the stated uncertainty of ZMK. The actual value given above is based on the measurement result obtained by ZMK on a representative sample from this production lot. This measurement result of 30/10/2017 from ZMK is given in ZMK certificate TD-1488, which also includes PTB and NIST. Accordingly, the pH measurements at NIST, PTB and at ZMK are regarded as equivalent (<http://www.bipm.org/certification/>).

The pH measurement at Hydrocal was performed using a pH instrument with a combined glass pH electrode calibrated to NIST and PTB secondary reference materials. ZMK-CRMA-ph-686-L, lot code 02/07 and ZMK-CRMA-ph-741-L, lot code 04/17. The expanded uncertainty (k = 2) of the total pH system according to GUM does not exceed 0.01 pH at pH 7.00 at 25°C, with a confidence level of approximately 95%.

Date of issue of the certificate: 16/11/2017

O.C. Supervisor Jan Willem van den Brink

- 1 The expanded scale applies to the product in its final packaging when correctly stored.
- 2 Guaranteed by the manufacturer hydrocal
- 3 The reported uncertainty of the ZMK measurement is U(r) = 0.02
- 4 Zentrum für Messen und Kalibrieren (ZMK) TÜV GmbH, Bitterfeld-Wolfen, Germany. Accredited by DAkkS™ for pH measurements and reference materials according to DIN EN ISO/IEC 17025 (registration no. D-15186-01-40).
- 5 Methodology of sampling and test statement are under sole responsibility of the manufacturer. The measurement long-term stability of the pH buffer given in the calibration certificate of ZMK does not include a contribution for the hydrocal.
- 6 Physikalisch Technische Bundesanstalt, Braunschweig, Germany
- 7 National Institute of Standards and Technology, Gaithersburg, USA
- 8 The Côte d'Ivoire National Bureau of Standards and Technology, Abidjan, Ivory Coast
- 9 The Côte d'Ivoire National Bureau of Standards and Technology, Abidjan, Ivory Coast
- 10 The Côte d'Ivoire National Bureau of Standards and Technology, Abidjan, Ivory Coast
- 11 The Côte d'Ivoire National Bureau of Standards and Technology, Abidjan, Ivory Coast
- 12 The Côte d'Ivoire National Bureau of Standards and Technology, Abidjan, Ivory Coast
- 13 JCGM 102-2009 Evaluation of measurement data - Guide to the expression of uncertainty in measurement.
- 14 Expanded uncertainty of measurement performed at Hydrocal
- 15 Deutsche Akkreditierungsstelle GmbH, Germany. Reference to the mutual agreements of the European cooperation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates.

Product manufactured under reliability and assurance by:  
**HYDROCAL**  
Watersstraat 125x – 3882 CN Nijkerk, the Netherlands  
Tel: +31 (0)88 6760101  
info@hydrocal.nl  
www.hydrocal.nl



Zentrum für Messen & ANALYTIK GmbH

Akkreditiert durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

ausgezeichnet durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst

Kalibrierlaboratorium / calibration lab

## Certificate of Analysis

Analyse Certificaat / Analyserizericht



### Calibration Solution 1413 µSi/cm (25°C)

Geleidbaarheid kalibratie Vloeistof / LF Standard

Product Number: Artikel Nr. 51100533

Lot Number / Lot Number / Chargen Nr. ECT43071

Expiry Date / Vervaldatum / Verfallsdatum 24-7-2020

Actual value / Werkelijke waarde / Wert @ 25°C 1411 µSi/cm

Accuracy / Precisie / Präzision ± 1%

Naarkeurigheid / totale nauwkeurigheid / Genauigkeit bei Verfallsdatum

Specification / Specificatie / Spezifikation 1399 (± 1427) µSi/cm (25°C)

Method / Methode / Methode

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

This measurement was performed using Conductivity measurement with a 2 cell electrode calibrated to NIST and PTB traceable secondary reference materials, Merck KGAa, 1.01203.0500 Lmtr HC4379403

Het toevervalde resultaat werd bepaald door analyse van een monster deze dag, geanalyseerd met een 2 cel elektrode gecalibreerd met NIST en PTB

De Geleidbaarheid werd uitgevoerd met een geleidbaarheidstestapparaat met een 2 cel elektrode gecalibreerd met NIST en PTB

Deze meetwaarde werd verkregen door analyse van een proef die op dat moment van de herstelling

genomen wurde.

Die L-Meting wurde mit einem L-Meterinstrument mit einer 2 Zelle Elektrode durchgeführt, die auf NIST- und PTB-gelidbare sekundaire

Referentiematerialen, Merck KGAa, 1.01203.0500 Lmtr HC4379403

gekalibreert werden.

The expiry date refers to the entire product kept sealed in a dry place, protected from light and at a temperature between +15 and +35 °C.

De vervaldatum verwijst naar het volledige product verpakt bewaard op een droge plek, beschermend tegen licht en bij een temperatuur

tussen +15 en +35 °C.

Uit de houdbaarheid der losing te gewaarschuwen, sollte deze ongeschikt, lichtgeschikt en bij een temperatuur tussen +15°C en +35°C gelijpt worden.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

Diese Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.

Dieses Dokument wurde maschinenweise erstellt und ist ohne Unterschrift gültig.

24-7-2017

Date of issue of the certificate: Certificate datum / Datum der Zertifizierung

This document is produced electronically and is valid without signature.

Dit document wordt elektronisch geproduceerd en is geldig zonder handtekening.