



Laboratory Electrodes and Calibration Solutions

Reliable pH results made easier.



Hamilton as Partner for your pH Measurement



For more than three decades, Hamilton has been setting standards in pH measurement technology. As a fully integrated manufacturer, we develop and produce every critical component of our pH sensors in-house, from the pH-sensitive glass membrane and reference systems to the electrolytes and final sensor assembly.

Our deep expertise in electrochemistry, sensor design, and manufacturing allows us to continuously refine our technologies and support customers with application knowledge that goes far beyond the sensor itself.

For laboratories demanding the highest level of accuracy, Hamilton's Single Pore Glass sensor achieved the highest accuracy among the electrodes tested in an independent comparative study conducted by PTB in Germany.

Your Benefits

- More than 30 years of pH measurement expertise
- Complete in-house manufacturing from glass to electrolyte
- Trusted partner for laboratory and analytical applications
- Highest accuracy demonstrated in independent PTB comparative testing

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What Sets Hamilton Apart

Hamilton pH sensors combine innovative reference technologies and application-specific glass formulations to deliver fast, stable and reliable measurements – even under challenging conditions.

Single Pore® Concept Reliable performance with less maintenance

The patented Single Pore liquid junction ensures controlled electrolyte contact and reduces clogging – for faster response, greater stability and longer sensor life.

Polisolve™ (Plus) Electrolyte Built for demanding applications

The acrylamide-free polymer electrolyte enables reliable measurements across pH 0–14 and –10 °C to 130 °C, including low-conductivity samples, suspensions and organic solvents.

Your Benefit

- Reliable measurements
- Reduced maintenance
- Broad sensor portfolio for your application

Hamilton pH Membrane Glass The right sensor for every application

Hamilton's proprietary glass formulations are optimized for specific measurement conditions:

HF Glass: Reliable routine measurements in aqueous samples.

V Glass: Fast, stable performance, especially in low-conductivity samples. Not for strong acids or bases.

H Glass: High accuracy at high pH, elevated temperatures and in partially aqueous media.

Everef™ Reference System Long-lasting sensor stability

The optimized reference design minimizes drift and electrolyte depletion – ensuring consistent accuracy and longer sensor life, even in low-ionic-strength and partially aqueous media.

How to Handle a pH Sensor Properly



Cleaning of Sensor and Equipment

Contamination, particularly at the liquid junction, can interfere with the measurement signal, resulting in slower response times and inaccurate measurements.

- Remove grease, oil, and other organic residues using soap and water.
- Use the Hamilton Cleaning Solution Set (REF 238290) for regular cleaning.
- After cleaning, condition the sensor in Hamilton Storage Solution for at least 2 hours, then recalibrate before use.
- Use the Hamilton Cleaning Solution Set for routine maintenance and benefit from all needed solutions in one Set (REF 238290).



Calibration Solutions

Accurate calibration starts with high-quality buffer solutions. For best results:

- Calibrate in the calibration chamber of the DuraCal bottle or a clean beaker.
- Close buffer bottles immediately after use to minimize contamination and CO₂ absorption from the air.
- Discard used buffer solutions according to the Safety Data Sheet (SDS).



Calibration

Proper calibration is essential for accurate and reproducible pH measurements. Before and during calibration:

- Open the electrolyte refill plug during measurement (except for gel-filled electrodes).
- Maintain the electrolyte level above the sample level to prevent sample ingress.
- Allow the sensor to reach the sample temperature before calibration or measurement.
- Rinse the sensor with deionized water between measurements.
- Gently blot dry with a lint-free tissue. Do not rub the pH glass membrane.

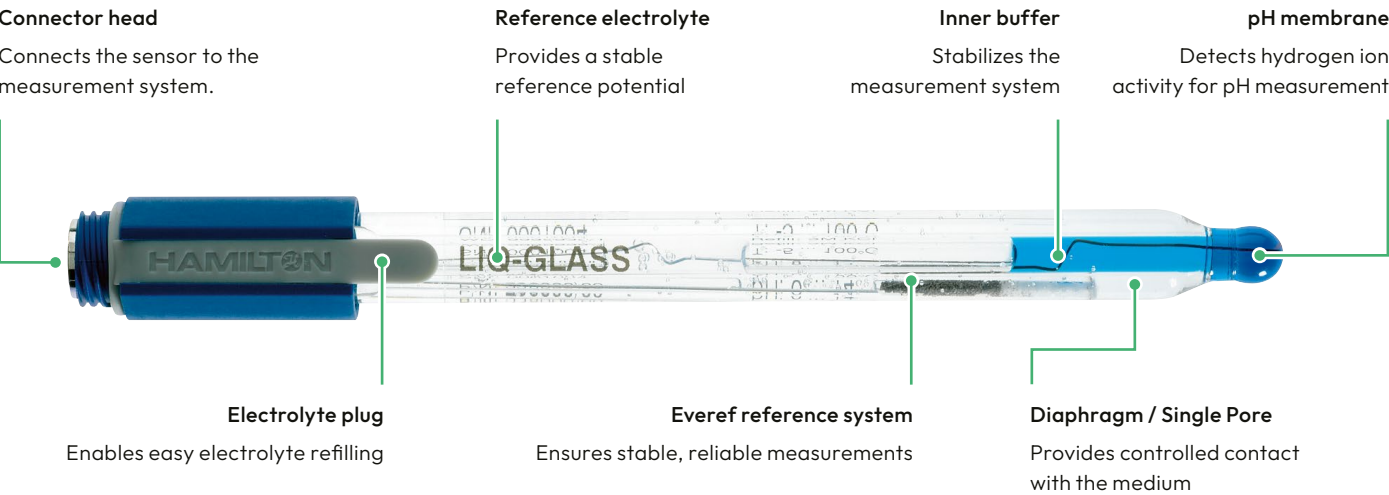


Storage

Proper storage helps maintain sensor performance and extends service life.

- Store the sensor with the electrolyte refill plug closed.
- Keep the sensor in reference electrolyte or preferably in Hamilton Storage Solution (REF 238931).
- The storage solution helps maintain both the diaphragm and the pH glass membrane.
- **Never store a pH sensor dry or in deionized water.**

Construction of a pH electrode



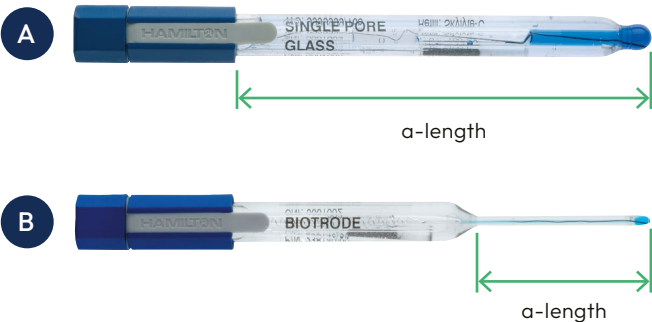
All Hamilton electrolytes are silver-free for uncompromised measurements. Shape and glass type are optimized for your application.

Specifications Electrodes

	Nominal Measurement Range	Temperature Range	Reference Electrolyte	Reference System	Shaft Material	Shaft Diameter Below (mm)	Shaft Length (a)	Membrane Glass	Membrane Shape	Liquid junction	Number of Diaphragms	Minimum Immersion Depth (mm)	Connector Head	Temperature Sensor
Single Pore Glass	0 to 14	0 to 100°C	Skylyte-CL	Everef	Glass	12	120 mm	H glass	Cylindrical	Single Pore	1	15	S7	No
Liq-Glass	0 to 14	-10 to 100°C	3M KCL	Everef	Glass	12	120 mm	HF glass	Cylindrical	Ceramic	1	15	S7	No
Liq-Glass Temp BNC	0 to 14	-10 to 100°C	3M KCL	Everef	Glass	12	120 mm	HF glass	Cylindrical	Ceramic	1	15	Fixed cable with BNC plug 1 x 4 mm banana plug	Pt1000
Polilyte Lab	0 to 14	-10 to 80°C	Polisolve	Everef-B	Glass	12	120 mm	HF glass	Cylindrical	Single Pore	1	15	S7	No
Polilyte Lab Temp BNC	0 to 14	-10 to 80°C	Polisolve	Everef-B	Glass	12	120 mm	HF glass	Cylindrical	Single Pore	1	15	Fixed cable with BNC plug 1 x 4 mm banana plug	Pt1000
FlushTrode	0 to 14	-10 to 80°C	3M KCL	Everef	Glass	12	120 mm	HF glass	Cylindrical	Ground sleeve	1	30	S7	No
MiniTrode	0 to 14	0 to 100°C	3M KCL	Everef	Glass	3	60 mm	HF glass	Cylindrical	Ceramic	1	7	S7	No
FoodTrode	0 to 14	-10 to 100°C	Protelyte	Everef	Glass	12	120 mm	HF glass	Cylindrical	Ceramic	3	20	S7	No
Double Pore	0 to 14	0 to 60°C	Polisolve	Ag/AgCl	Glass	6	35 mm	HF glass	Spear	Single Pore	2	15	S7	No
Double Pore F	0 to 14	0 to 60°C	Polisolve	Ag/AgCl	Glass	6	35 mm	V glass	Conical	Single Pore	2	15	S7	No
Polyplast	0 to 14	0 to 60°C	Polisolve	Ag/AgCl	Plastic	12	120 mm	V glass	Cylindrical	Single Pore	1	10	S7	No
Polyplast BNC	0 to 14	0 to 60°C	Polisolve	Ag/AgCl	Plastic	12	120 mm	V glass	Cylindrical	Single Pore	1	10	Fixed cable with BNC plug	No

Length of the Electrode

What is a-length, and where does it start?
The length depends on the construction of the electrode. With electrodes that have a 12 mm shaft passing all the way through the body (see picture A) a-length is measured from the connector head to the end of the electrode. With electrodes that have a shaft diameter of less than 12 mm, a-length begins at the smaller diameter (see picture B).



Hamilton Watering Cap

The Hamilton Watering Cap, with its ease of use, seals securely when closed, keeping the sensor hydrated throughout storage. **Simple. Smart. Reliable.**



Compatible With Many Analog pH Meters

Hamilton laboratory electrodes are analog pH electrodes and can be used with many standard laboratory pH meters when the electrical connection and temperature input match the meter. Most electrodes are available with an S7 connector head or with a fixed BNC cable, depending on the version. For electrodes with a separate temperature signal, the temperature connector must also match the meter input.

This gives laboratories flexibility: customers can use Hamilton electrodes with many established analog pH meters already installed in the lab. If the meter type, connector or temperature input is unclear, Hamilton Application Support can help select the correct electrode and cable combination.

Individually Tested. Fully Traceable.

Every Hamilton laboratory electrode is supplied with a permanent serial number and an individual test certificate containing measured millivolt values. Each sensor is verified before shipment and can be clearly identified throughout its entire service life. This combination of documented testing and full traceability supports quality assurance and provides confidence in every measurement.

- Permanent serial number
- Individual test certificate
- Measured mV values
- Documented sensor verification

What to check before ordering

- **pH input:** meter-specific connection
- **Temperature input:** Pt1000 or no temperature sensor
- **Application:** sample type, temperature, volume and contamination risk
- **Electrode design:** glass/plastic shaft, refillable/sealed and junction type

Choose Your Electrode in 3 Steps

T

Application Type

Consider the sample's composition, consistency, and size.

Handling Need

Choose the sensor material,
shape and electrolyte
concept that fits your
handling needs.

3

Meter Connection

Select a S7 connector or fixed cable. For temperature compensation, verify meter compatibility before ordering.

Application Type	Typical examples	Recommended electrode	Why
Routine lab and titration	• Buffers • Aqueous solutions • Acid/base titrations	Liq-Glass Liq-Glass Temp BNC	Reliable routine electrode with refillable electrolyte and Everef reference
High-accuracy or low ionic strength	• Weakly ionized samples • Ultra-pure water • Difficult stable readings	Single Pore Glass	Designed for high-accuracy measurements, low ionic strength and demanding samples
Suspensions and emulsions	• Paint & Pigmented samples • Cosmetics • Wastewater • Acid/base titrations	Polilyte Lab Polilyte Lab Temp BNC	Low-maintenance design and Single Pore junction for difficult routine samples
Viscous or protein-containing samples	• Creams • Cosmetics • Protein-rich media	FlushTrode	Sleeve diaphragm supports cleaning and sample contact
Small sample volumes or narrow vessels	• Vials • Narrow tubes • Limited sample quantities	MiniTrode	3 mm shaft and 7 mm immersion depth for limited sample volume
Food QC, protein-rich samples	• Milk • Cream • Yogurt • Beer • Fruit juice	FoodTrode	Protelyte and three ceramic diaphragms for food QC matrices
Solid and semi-solid food	• Meat • Cheese • Butter	Double Pore Double Pore F	Puncture design for meat, cheese and similar samples
Robust portable-style use	• Water • Sewage • Field-style • Routine checks	Polyplast Polyplast BNC	Plastic shaft and low-maintenance design for robust handling

Declaration of Quality

FoodTrode

Product Identification

Ref	236085
SN	24645
Lot	111246251

Factory Test Conditions		
Tests were performed according to	111002269	
Buffer Temperature	25.1 °C	

Factory Test Results		
	Test Specification	Result
Reading in pH ⁷ (zero point)	0 mV ± 20 mV	0 mV
Reading in pH ⁴		176 mV
Slope (at 25°C)	≥ 97 %	passed
QualiViv Test successfully passed	2021-08-16	

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HAMILTON

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General Laboratory Applications

Liq-Glass™

REF 238000



Routine glass electrode with S7 connector head.

Liq-Glass™ Temp BNC

REF 242056



Routine glass electrode with fixed BNC cable and Pt1000 temperature signal.

Choose this electrode if you run daily laboratory pH measurements in aqueous samples or acid/base titrations and want a robust, refillable glass electrode with clear traceability.

Consider another electrode if your sample is viscous, highly contaminated, very small in volume, or solid/semi-solid.

Benefits

- Reliable routine results for standard lab work
- Refillable design supports controlled maintenance
- Universally applicable, in strong acids as well as in strong bases

Single Pore™ Glass

REF 238160



High-confidence electrode for demanding laboratory measurements.

Choose this electrode if you need high-confidence pH measurements, especially in low-conductivity media, emulsions or applications where stable electrolyte contact is critical.

Consider another electrode if you only need standard routine titration performance or a low-maintenance sealed electrode.

Benefits

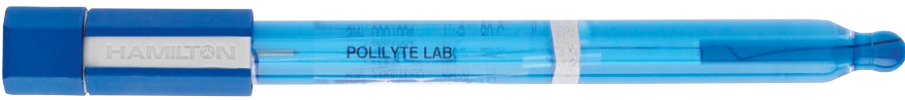
- High confidence in critical pH results
- Fast stabilization in demanding samples (e.g. buffer preparation)
- Reduced risk of junction-related measurement issues

In PTB comparative testing, Hamilton Single Pore Glass achieved top accuracy among the tested laboratory electrodes.

Low-Maintenance Routine and Difficult Samples

Polilyte Lab™

REF 238403



Low-maintenance glass electrode with Polysolve and Single Pore.

Polilyte Lab™ Temp BNC

REF 242060



Polilyte Lab variant with fixed BNC cable and Pt1000 temperature signal.

Choose this electrode if you measure emulsions, suspensions, water/wastewater or daily Quality Control samples that are not always clean and simple.

Consider another electrode if you need a refillable electrode for strict electrolyte control or very small sample volumes.

Benefits

- Universal electrode with low maintenance due to solid non refillable polymer electrolyte
- Stable measurements in difficult samples
- Reduced risk of blocked liquid junction

Benefit from Hamilton’s Expertise

Accurate pH measurement requires a thorough understanding of electrochemical principles and the many factors that influence sensor performance. With decades of experience in pH measurement and sensor technology, Hamilton helps you achieve reliable, high-quality results.



Application Support

Our experts provide comprehensive technical support, including remote assistance for sensor integration, parameterization, troubleshooting, training, application consulting, and product demonstrations. Whether you are optimizing an existing process or integrating new systems, we are here to help.



Hands-on Training

Empower your team with practical training delivered by Hamilton specialists. Learn best practices for sensor installation, measurement technology, data interpretation, and maintenance to maximize performance and confidence in daily operation.

→ customersupport.pa.ch@hamilton.ch

Special Laboratory Applications

FlushTrode™

REF 238060



Easy-to-clean and refillable glass electrode with sleeve diaphragm.

Choose this electrode if your samples are viscous, protein-containing, ion-weak or difficult to clean, for example creams, cosmetics or protein-rich media.

Consider another electrode if you measure only clean routine samples or very small volumes.

Benefits

- Easier cleaning after difficult samples
- More reliable sample contact in viscous media
- Better recovery after contamination

MiniTrode™

REF 238100



Small-shaft glass electrode for limited sample volume.

Choose this electrode if your sample amount is limited or the measurement vessel is narrow, for example vials or small tubes.

Consider another electrode if your sample is solid/semi-solid or needs a robust plastic shaft.

Benefits

- Reliable measurement with limited sample volume
- Easier access to narrow vessels due to only 3 mm shaft diameter
- Less sample consumption with only 7 mm insertion depth required

Food and Beverage Applications

FoodTrode™

REF 238285



Refillable glass electrode for protein-rich food media.

Choose this electrode if you measure protein-containing food or beverage samples such as milk, cream, yogurt, beer, fruit juice or similar matrices.

Consider another electrode if you need to pierce solid or semi-solid samples directly.

Benefits

- Stable, reproducible measurements in protein-containing samples
- Easier cleaning in food Quality Control
- Three ceramic diaphragms support stable, reproducible measurements in food samples

Double Pore™

REF 238400



Puncture electrode for solid and semi-solid samples.

Choose this electrode if you measure pH directly in solid or semi-solid food samples, for example meat, cheese or butter.

Consider another electrode if your sample is liquid, highly aqueous or you prefer a standard 12 mm routine electrode.

Benefits

- Easier penetration into semi-solid samples
- Lower risk of junction blockage due to two single pores
- Reduced maintenance thanks to the no-refill solid polymer electrolyte

Double Pore™ F

REF 242067



Narrow puncture version for solid and semi-solid samples.

Choose this electrode if you need a slim puncture electrode for semi-solid samples and prefer the durability and safety of a robust PEEK shaft.

Consider another electrode if the sample is liquid or requires routine bench robustness rather than puncture measurement.

Benefits

- Easier penetration into semi-solid samples
- Lightweight and robust PEEK shaft for reliable everyday handling
- Reduced maintenance thanks to the no-refill solid polymer electrolyte

Field pH Measurement

Polyplast™

REF 238380



Robust plastic-shaft electrode with low-maintenance.

Polyplast™ BNC

REF 238381



Robust plastic-shaft electrode with fixed BNC cable.

Choose this electrode if you need a robust, low-maintenance electrode for water, wastewater or routine checks or field pH measurements where glass breakage is a concern.

Consider another electrode if you need high-accuracy measurements in low-conductivity media or a refillable glass electrode.

Benefits

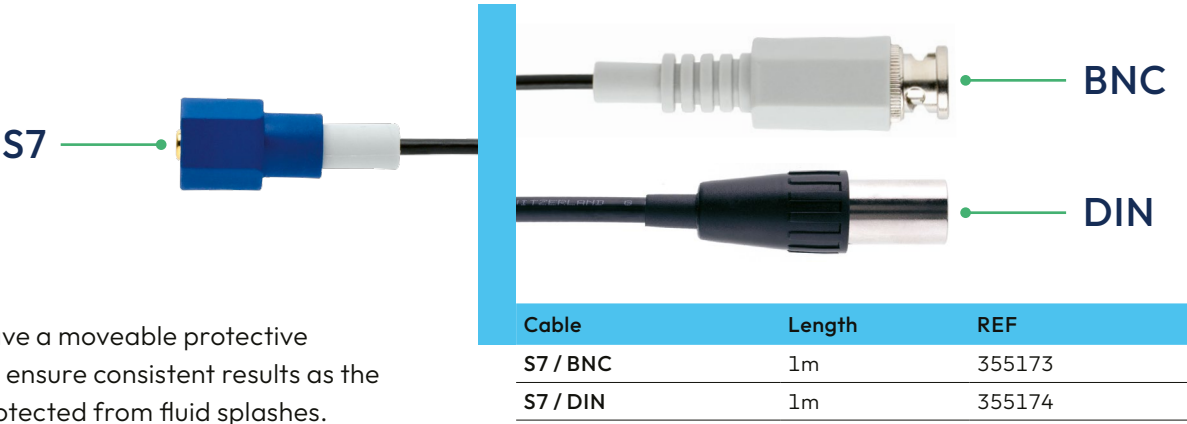
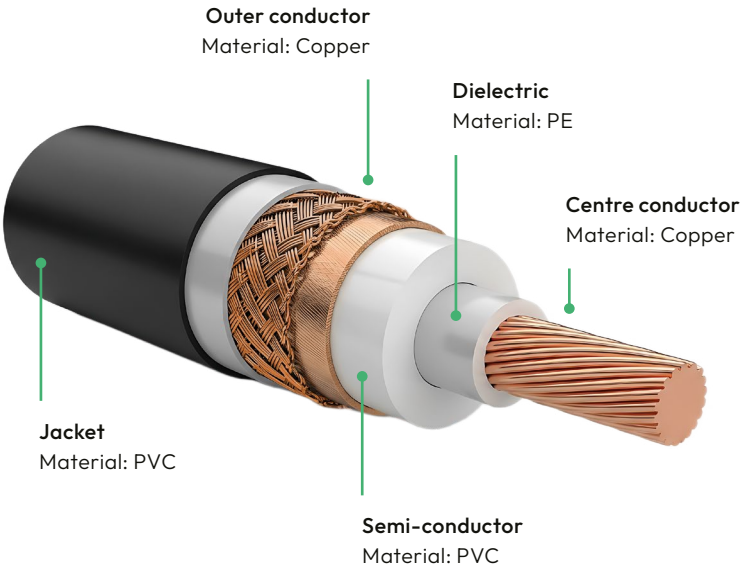
- Robust handling in daily use
- Shatter-proof plastic-shaft
- Reduced maintenance thanks to the no-refill solid polymer electrolyte

Accessories

Cables

Accurate pH measurement depends on the quality and integrity of the sensor cable. As illustrated, the conductor, shielding, insulation, and outer jacket work together to preserve signal quality, minimize electrical noise, and ensure precise, stable measurement results.

The cables are fitted with an S7 socket. The equipment-side plug must be chosen to fit the pH meter.



All BNC plugs have a moveable protective cover. This helps ensure consistent results as the plug is better protected from fluid splashes.

Sustainability

Our new innovative injection-moulded paper fibre trays are designed to provide maximum protection for every sensor through specific geometries, ensuring safe transport and reliable storage.

At the same time, the use of renewable materials, a consolidated supplier base, and reduced packaging volume significantly lower the environmental footprint – representing an important step towards sustainable packaging solutions.



Electrolytes & Solutions



Electrolyte

Electrolyte selection is critical for proper sensor performance. Always check the electrode label or product documentation to verify which electrolyte must be used for refilling. Using the wrong electrolyte can affect measurement accuracy and sensor lifetime. The required electrolyte is typically indicated on the electrode label, datasheet, or operating instructions.

Description		REF
3M KCl	100 ml	238036
Skylyte-CL	100 ml	242080
Protelyte	100 ml	238038

Storage solution

For long life and faster electrode response times, it is best to store electrodes in our storage solution. This is an acid-buffered solution that in addition to providing optimized storage, also ensures regeneration of the electrode.

Description		REF
Storage solution	500 ml	238931



Cleaning Solution Set

Depending on the type of application the pH glass or diaphragm can become contaminated through various ingredients of the measuring solution. This is indicated by slow response of the electrode, or even incorrect readings. To overcome these problems, Hamilton has developed a cleaning solution set.

The intention of Hamilton is to have an overall cleaning of the pH glass as well as the diaphragm. The cleaning itself should be easy and fast.

The set comprises Cleaning Solution A, Cleaning solution B and a storage solution. To clean the electrode put it into each solution for 15 - 30 minutes, and your electrode is ready for new measurements again.

Description		REF
Cleaning Solution Set		238290
• pH Cleaning Solution A	500mL	
• pH Cleaning Solution B	500mL	
• pH Storage Solution	500mL	

Certified Reference Material (CRM)

Because every measurement is only as good as its calibration.

Our ISO 17034 accreditation, granted by the Swiss Accreditation Service (SAS), demonstrates that our certified reference materials are produced under rigorous quality control, with traceability and reliability built into every step. The production of these materials requires an unbroken chain of comparisons to primary reference materials of the highest metrological quality, such as those

provided by NIST and PTB. The measurement laboratories are accredited according to ISO 17025 by DAkkS or DANAK. These accreditations provide documented assurance that your calibration standards are fully traceable, compliant, and audit-ready, strengthening regulatory confidence and simplifying verification processes.

✓

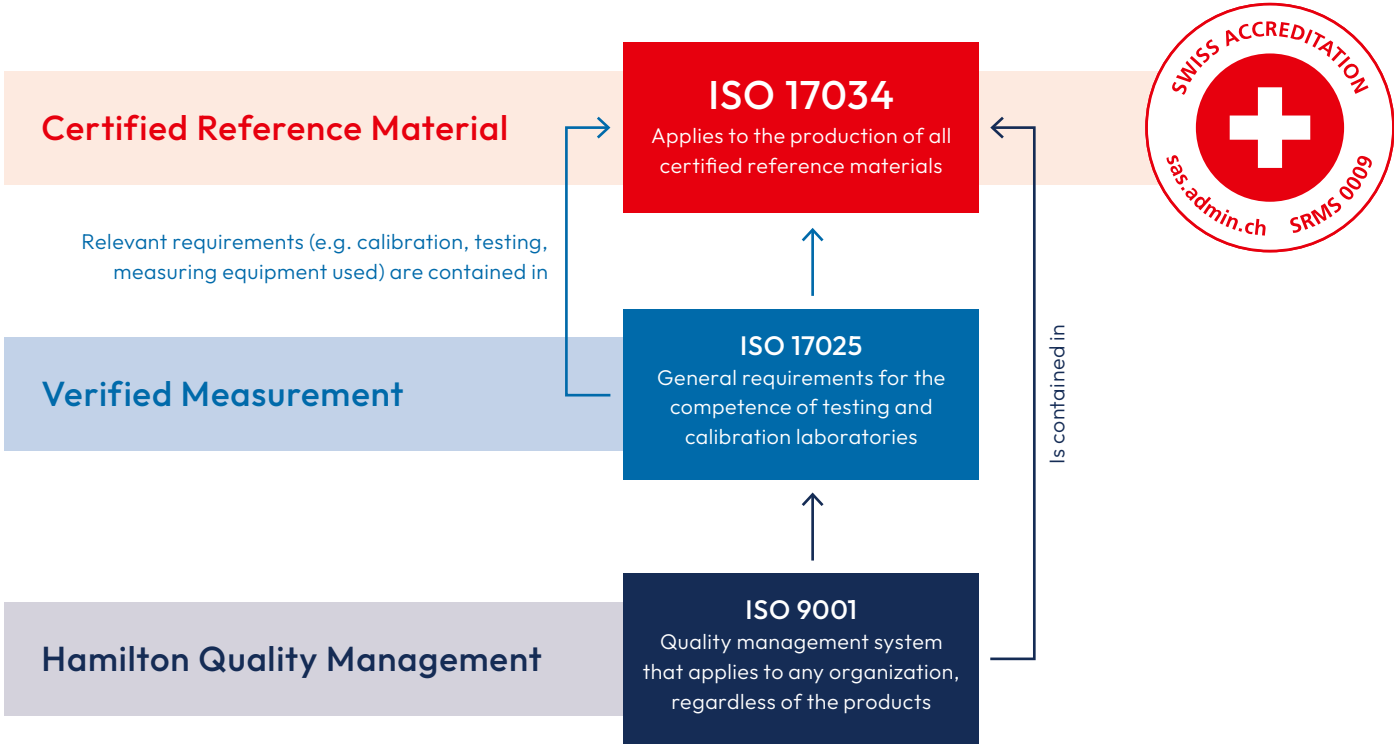
Traceable Accuracy and Stability

✓

Regulatory Compliance and Measurement Confidence

✓

Reduced Audit Effort and Risk



Buffers Designed for Compliance and Confidence



Our buffer portfolio delivers best-in-class accuracy of up to ±0.01 pH and outstanding stability of up to five years. Stability is fully documented under realistic conditions, including containers opened for up to 15 hours, ensuring reliable performance in daily laboratory and process environments.

With 14 certified pH values ranging from pH 1.09 to pH 12.00, our buffers cover the complete pH scale from highly acidic through neutral to alkaline. This comprehensive range supports a wide variety of processes and ensures that sensors are always calibrated appropriately for their intended application.

To simplify workflows, especially in biopharma environments where processes rarely operate at a single pH, Hamilton offers pH buffer sets. Each set contains three pH values, ideal for two-point calibration with validation at a third point. This reduces the effort required to source individual buffers and enables faster and more efficient calibration routines.

Benefits of Hamilton Buffers

- Best-in-class accuracy and stability products with Certificate of Analysis
- All products measured according and selected ones are ISO17034 CRM
- Convenient 250 mL or 500 mL bottle with built-in calibration compartment. Only about 15 mL of buffer are used per calibration

pH	Value	Package [L]	REF	Certified Accuracy	Stability (in months)	Norm
	1.09	0.5	238271	± 0.03 pH	60	DAkkS/DANAK (ISO 17025)
	1.68	0.5	238272	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
	2.00	0.5	238273	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
		3	10198863			
		10	10117113			
		25	10204498			
	3.06	0.5	238274	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
	4.01	0.25	238317	± 0.01 pH	60	DAkkS/DANAK (ISO 17025) ISO 17034 CRM
		0.5	238217			
		3 x 0.5	238917			
		3	10198864			
		5	238332			
		10	238194			
		25	10204497			
	5.00	0.5	238275	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
	6.00	0.5	238276	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
	7.00	0.25	238318	± 0.01 pH	60	DAkkS/DANAK (ISO 17025) ISO 17034 CRM
		0.5	238218			
		3 x 0.5	238918			
		3	10198865			
		5	238333			
		10	238188			
		25	10204496			
	8.00	0.5	238277	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
	9.00	0.5	242763	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
	9.21	0.25	238319	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
		0.5	238219			
		3 x 0.5	238919			
		10	238216			
	10.01	0.25	238321	± 0.02 pH	60	DAkkS/DANAK (ISO 17025)
		0.5	238223			
		3 x 0.5	238923			
		3	10198866			
		10	238187			
		25	10204495			
	11.00	0.5	238278	± 0.05 pH	24	DAkkS/DANAK (ISO 17025)
	12.00	0.5	238279	± 0.05 pH	24	DAkkS/DANAK (ISO 17025)
		3	10198867			
		25	10204494			

Our pH buffers at 4.01, 7.00, 8.00, 9.21 and 10.01 are conveniently color-coded for quick identification. For applications where a colorless solution is preferred, we also offer colorless equivalents. Please visit our website for more details. The 250 mL and 500 mL products are delivered in the proven Calpack Bottle with calibration chamber.

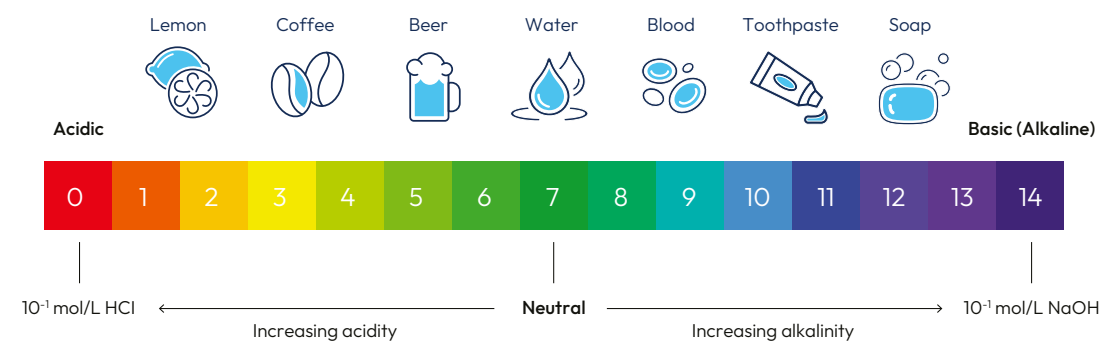
Under good laboratory conditions, calibration solutions demonstrably retain the stated shelf life and accuracy indicated on the product label even after opening.

The 3 x 500 mL sets allow you to order the same buffer three times, with the assurance that all bottles come from the same production lot.

pH	Buffer Set	Package [L]	REF
	DuraCal Buffer pH 4.01 / 7.00 / 9.21	0.5 each	238922
	DuraCal Buffer pH 4.01 / 7.00 / 10.01	0.5 each	238924

ORP	Redox Value mV	Package [L]	REF	mV Accuracy	Stability (in months)
	271 mV	0.5	238228	± 5 mV	24
	475 mV	0.5	238227	± 5 mV	24
	475 mV	0.25	238322	± 5 mV	24

The pH Scale



What is pH?

pH indicates how acidic or basic a solution is. It ranges from 0 to 14, where:

- pH < 7 = acidic (high H₃O⁺ concentration)
- pH = 7 = neutral
- pH > 7 = basic (low H₃O⁺ concentration)

pH is defined as the negative logarithm of the hydronium ion concentration:

$$\text{pH} = -\log [\text{H}_3\text{O}^+]$$

Principle of pH Measurement

pH measurement is based on the potentiometric principle: the activity of hydrogen ions (H₃O⁺) in a solution is converted into an electrical voltage. This voltage depends on the pH of the solution:

- **Low pH (acidic):** high H₃O⁺ concentration → higher voltage
- **High pH (basic):** low H₃O⁺ concentration → lower voltage

The voltage between the internal buffer and the sample solution is measured by a high-impedance meter. Using a calibration curve, the meter converts the voltage into a pH value.

How a pH Electrode Works

A pH electrode has two parts:

- a pH-sensitive glass membrane that responds to H₃O⁺ ions
- a reference electrode that provides a stable reference potential

When the membrane is in contact with the sample, a voltage is generated proportional to the pH. This voltage is measured against the reference electrode. The electrode is calibrated with standard buffer solutions to convert voltage into pH.

Temperature Influence

The measured pH and electrode response are temperature dependent. Modern pH meters use Automatic Temperature Compensation (ATC) with temperature sensors.

For the most accurate results:

- Calibrate at the same temperature as measurement
- Always record the temperature with the pH value
- Compare measurements at the same temperature



If you would like to get more information regarding pH measurement

Conductivity Standards



The patented glycerin matrix minimizes sensitivity to air and CO₂, supporting a documented shelf life of 12 or 36 months. Hamilton conductivity standards retain their documented stability even after opening for at least one hour of total opening time.

Our glycerin-based standards, supplied in 250 ml glass bottles, offer long-term stability, minimal evaporation, and enhanced resistance to microbial growth, ensuring consistent and reliable performance over extended periods. For routine applications,

our water-based Basic Line standards in 500 ml DuraCal bottles provide low viscosity for easy handling and minimal air bubbles, combining practicality with precision.

Hamilton is the first manufacturer to certify 1.3 µS/cm and 5 µS/cm standards with ±1% accuracy and documented shelf life. All standards are independently verified by Europe's leading metrology institutes (DFM, ZMK), ensuring your low-conductivity measurements are precise, traceable, and fully defensible.

Unique advantages

- Best in class accuracy and stability products with Certificate of Analysis e.g. 1% for 12 months for 1.3 µS/cm and 1% for 36 months for 100 µS/cm
- Patented glycerin matrix for low conductivity values
- Specified stability maintained even if bottles are open up to 60 minutes in total
- Produced according ISO17025 and ISO17034 standards

Value at 25 °C µS/cm	Package [mL]	REF	Base	Certified Accuracy	Stability (in months)	17025 Verification	ISO 17034 Certified
1.3	250 *	238973	Glycerin	1%	12	DAkKS/DANAK	Yes 
5	250 *	238926	Glycerin	1%	36	DAkKS/DANAK	Yes 
15	250 *	238927	Glycerin	1%	36	DAkKS/DANAK	Yes 
84	500 **	238984	Water	1%	18	DAkKS/DANAK	No
100	250 *	238934	Glycerin	1%	36	DAkKS/DANAK	Yes 
147	500 **	238985	Water	1%	18	DAkKS/DANAK	No
706	250 *	238929	Glycerin	2%	36	DAkKS/DANAK	No
1413	250 *	238928	Glycerin	1%	36	DAkKS/DANAK	No
1413	500 **	238986	Water	1%	18	DAkKS/DANAK	No
12'880	500 **	238988	Water	1%	18	DAkKS/DANAK	No
100'000	250 *	238935	Glycerin	1%	36	DAkKS/DANAK	No

* Glass bottle / ** Calpack bottle

[illegible]23



Years of Experience
75+



Locations Worldwide
22+



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3,000+

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