METTER TOLEDO
Laboratory Division



Calibration and Care Solutions

Quality Products for Accurate Measurements

METTLER TOLEDO

We’ve got you covered

Comprehensive portfolio of calibration and verification solutions for reliable and accurate determinations of pH, conductivity, dissolved oxygen, redox potential and ion concentration; complemented by a full set of sensor care solutions.



Everything you need

- Full range of values for calibration and verification processes
- Maintenance solutions to ensure extended sensor lifetime and consistent performance

Trusted Results

- Calibration standards with CoA prove adherence to stringent quality standards and ensure traceability to national metrology institutes

Safety and convenience

- Elaborate bottle labels for ease-of-use and enhanced safety
- Small bottles and sachets to reduce risk of expired shelf life and contamination

Your reliable partner

- The METTLER TOLEDO expert guidance is just a call away
- Scientific, risk-based guidelines
- System recommendations tailored to your needs

Portfolio Highlights

METTLER TOLEDO

All one needs for accurate results

- Full range of values including calibration buffers for extreme and specific pH values
- Traceability to Certified Reference Materials guarantees highest product quality
- Compliance to USP standards for regulated environments
- Single-use sachets to minimize contamination risk
- Non-Borate buffer pH 9.00, addressing regulatory concerns and hazardous goods labeling issues
- Electrolytes and Maintenance Solutions developed for METTLER TOLEDO sensors
- Elaborate bottle labels for safe and convenient use, color coded buffers for calibration (pH 4.01, 7.00, 9.21)
- Safety Data Sheets (SDS) document compliance to regulations and provide guidance for safe handling



Product Details Technical pH Buffers

pH measurement accuracy starts with a proper calibration

- Full range of values for calibration and verification
  - Extreme and specific pH values allow for 5-point calibration and 4-point verification
  - Single-use sachets for guaranteed contamination-free solutions
  - 250 mL bottles for easy handling, reduced risk of expired shelf life and contamination vs. bulk containers. Less waste of leftover solutions.
  - Non-Borate buffer pH 9.00 addressing regulatory concerns and hazardous goods labeling issues
- Traceability to Certified Reference Materials to guarantee highest quality
  - Certificate of Analysis (CoA) with lot number, production date, expiry date, and temperature-reference data (measured at 25 °C) with every solution documents successful product testing and enables traceability
- Compliance to USP <791>, Ph. Eur. 2.2.3, JP 2.54 for regulated environments such as pharmaceutical control
- Highly accurate. Measurement uncertainty from ±0.01 to ±0.05 pH units
- Easy recognition: color coded sachets and buffer solutions pH 4.01, 7.00, 9.21 in bottles



Product Details Specialty Buffers

Highly accurate solutions for upmost requirements

- NIST/DIN buffers
  - Conform to values defined by DIN 19266 and NIST with measurement uncertainty of +/- 0.010 to +/- 0.015 pH (exc. NIST/DIN pH buffer 12.454 with +/- 0.05 pH)
  - Compliance to USP 40 <791>, EP 2.2.3, JP XVII 2.54 for regulated environments e.g. pharmaceutical control
  - Single-use sachets to warrant contamination-free solutions
  - Extensive range of eight values from pH 1.679 to pH 12.454

- Certified buffers
  - Measured by DAkkS accredited laboratory according to ISO/IEC 17025

- Applicable for NIST/DIN and Certified buffers
  - Certificate of Analysis (CoA) with lot number, production date, expiry date, and temperature-reference data
  - 250 mL bottles for easy handling, reduced risk of expired shelf life and contamination vs. bulk containers. Less waste of leftover solutions
  - Traceability to Certified Reference Materials to guarantee highest product quality



Product Details Conductivity Standards

Quality reference standards for accurate measurements

- Comprehensive range of reference standards to enable accurate and reliable calibration and/or verification
  - Full range of values: from 1.3 µS/cm (single-use check solution) to 500,000 µS/cm
  - Low conductivity standards for the verification of the measurement system performance at low conductivity ranges
  - Small bottles and single-use sachets minimize the risk of contamination
  - Full range available in 250 mL bottles. 1,413 µS/cm and 12.88 mS/cm available in 20 mL sachets
- Measurement uncertainty from ± 1% to ± 2% (exc. 1.3 µS/cm)
- Temperature table printed on bottles and sachets to reduce measurement errors across different temperatures
- Traceability to Certified Reference Materials



Ready-to-use solutions - the proper mix for accurate results

- Calibration Standards
  - Accurate standards for the calibration of a wide range of ion-selective electrodes
  - 10, 100, 1000 ppm concentrations enable multiple-point calibrations

- Ionic Strength Adjustors (ISA)
  - ISA allow for accurate measurements by ensuring similar and constant ionic strength in both, samples and standard

- Reference Electrolyte
  - Ensure accurate and consistent measurements as well as fast sensor response time by using the correct electrolyte



Excellent care to prolong the sensor's lifespan

- Maintain the sensor at its peak performance by regularly using cleaning solutions to eliminate the most common contaminants
- Ensure the sensor is always ready to use by storing it in the dedicated InLab® Storage Solution
- Specialized regeneration solution to treat damaged, sluggish, or contaminated glass electrodes by removing a thin, damaged surface layer to expose a fresh, responsive membrane.
- Accurate pH measurement, even in challenging samples thanks to a selection of application-specific reference electrolytes
- All-in-One kits for peace of mind sensor maintenance



Safeguard the sensor performance

- Redox Buffer Solutions
  - Solutions to verify redox potentials, traceable to certified reference materials
  - The correlation table provided allows for correct temperature compensation



- Zero Oxygen Tablets for Dissolved Oxygen
  - Zero oxygen solutions can be prepared using Zero Oxygen Tablets and are used for calibration, verification, or conditioning purposes of DO sensors (especially when measurements are performed at low oxygen levels)



Maximize a secure and effortless measurement experience

Ease of use

- Pull-out booklet with relevant safety information in 13 languages integrated into label
- Tear-off adhesive sticker with information on expiry date, lot number and product specification for lab journal and quality records
- Temperature table for temperature compensation printed on label
- QR code for download of Certificate of Analysis (CoA) and Safety Datasheet on label, including material number for easy re-ordering
- Safety-ring on lid for easy detection of opened bottles





GreenMT: Corporate Responsibility and Sustainability Program

Sustainable Products and Services
Support our customers' sustainability goals

Responsible Supply Chain
Promote global best practices within our supply chain



Efficient Use of Resources
Keep our operations sustainable over the long term

Engaged Employees
Attract, develop, and retain the best employees

Good Corporate Governance
Follow governance best practices





Carbon neutral operations

100% Renewable Electricity

Zero Waste to landfill 2025

Responsible Sourcing

Approved Net Zero Targets

Climate Score A-

Silver Medal

Addressed UN Sustainable Development Goals

More information at www.mt.com/sustainability

Portfolio Overview Technical pH Buffers

pH value at 25 °C	Uncertainty	Total shelf-life (months)		Packaging				
		Bottles	Sachets	Single bottle 250 mL	Sixpack bottles 6 x 250 mL	Sachets 30 x 20 mL	Rainbow bottles 3x 2x 250 mL	Rainbow sachets 3x 10x 20 mL
1.00	± 0.02 pH	36	-	•	-	-	-	-
2.00	± 0.02 pH	36	24	•	•	•	-	-
3.00	± 0.02 pH	36	-	•	-	-	-	-
4.01	± 0.02 pH	36	24	•	•	•	•	•
5.00	± 0.02 pH	24	-	•	-	-	-	-
6.00	± 0.01 pH	24	-	•	-	-	-	-
7.00	± 0.02 pH	36	24	•	•	•	•	•
8.00	± 0.02 pH	24	-	•	-	-	-	-
9.00*	± 0.01 pH	24	-	•	-	-	-	-
9.21	± 0.02 pH	36	24	•	•	•	•	•
10.00	± 0.02 pH	24	-	•	•	-	•	-
10.01	± 0.02 pH	-	24	-	-	•	-	•
11.00	± 0.05 pH	24	12	•	•	•	-	-
12.00	± 0.05 pH	24	-	•	-	-	-	-
12.45	± 0.05 pH	24	-	•	-	-	-	-
13.00	± 0.05 pH	24	-	•	-	-	-	-

* Borate-free alternative to pH 9.21

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Portfolio Overview Specialty Buffers

	pH value at 25 °C	Uncertainty	Total shelf-life (months)		Certification	Packaging		
			Bottles	Sachets		Single bottle 250 mL	Sachets 30 x 20 mL	Sixpack bottles 6 x 250 mL
NIST/DIN pH Buffer	**1.679**	± 0.015 pH	24	-	-	•	-	-
	3.776	± 0.010 pH	24	-	-	•	-	-
	4.006	± 0.015 pH	24	24	-	•	•	-
	6.865	± 0.015 pH	24	24	-	•	•	-
	7.413	± 0.010 pH	24	-	-	•	-	-
	9.180	± 0.015 pH	12	12	-	•	•	-
	10.012	± 0.015 pH	12	12	-	•	•	-
	12.454	± 0.05 pH	3	-	-	•	-	-
Certified pH Buffer	**4.01**	± 0.02 pH	36	-	ISO/IEC 17025	•	-	•
	7.00	± 0.02 pH	36	-	ISO/IEC 17025	•	-	•
	9.21	± 0.02 pH	36	-	ISO/IEC 17025	•	-	•
	10.00	± 0.02 pH	24	-	ISO/IEC 17025	•	-	•

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Portfolio Overview Conductivity Standards

Conductivity at 25 °C	Uncertainty	Total shelf-life (months)		Packaging		
		Bottles	Sachets	Single bottle 250 mL	Sixpack bottles 6 x 250 mL	Sachets 30 x 20 mL
1.3 µS/cm*	± 0.05 µS/cm	3	-	•	-	-
5 µS/cm	± 1%	6	-	•	-	-
10 µS/cm	± 1%	6	-	•	-	-
84 µS/cm	± 1%	12	-	•	-	-
147 µS/cm	± 1%	12	-	•	-	-
500 µS/cm	± 1%	18	-	•	-	-
1,413 µS/cm	± 2%	24	24	•	•	•
10,000 µS/cm	± 1%	18	-	•	-	-
12.88 mS/cm	± 1.5%	24	24	•	•	•
100,000 µS/cm	± 1%	18	-	•	-	-
200,000 µS/cm	± 1%	18	-	•	-	-
300,000 µS/cm	± 1%	18	-	•	-	-
500,000 µS/cm	± 1%	24	-	•	-	-

* Single-use check solution

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Portfolio Overview Electrolytes for Reference Electrodes

	Application	Total shelf-life (months)	Packaging			
			Single bottle 25 mL	Single bottle 250 mL	Sixpack bottles 6 x 250 mL	Sixpack bottles 6 x 30 mL
3 mol/L KCl	ARGENTHAL™ reference systems	36	•	•	•	-
3 mol/L KCl, AgCl saturated	Ag / AgCl reference systems	36	•	•	•	-
1 mol/L KCl	Bridge electrolyte	36	•	-	-	-
1 mol/L KNO_3	Bridge electrolyte	36	•	•	•	-
FRISCOLYT-B™	Measurement at low temperature and for media with organic compounds (oil, proteins etc.)	36	•	•	•	-
1 mol/L LiCl in ethanol	Measurement in non-aqueous media	36	-	-	-	•

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	Comments	Total shelf-life (months)	Packaging	
			Single bottle 250 mL	Sixpack bottles 6 x 250 mL
Pepsin-HCl cleaning solution	To clean junctions with protein contamination; treatment time ~1 h	36	•	•
Thiourea cleaning solution	To clean junctions with silver sulfide contamination; treatment until discoloration	36	•	•
Regeneration solution	For the regeneration of glass sensors; treatment time ~1 min	36	•	-
InLab Storage solution	For the storage of pH and ORP sensors	36	•	-
pH All-in-One Kit I	Contains pH buffers 4.01 / 7.00 / 9.21, 3 mol/L KCl, Pepsin-HCl solution, Inlab Storage solution	36	-	•
pH All-in-One Kit II	Contains pH buffers 4.01 / 7.00 / 10.00, 3 mol/L KCl, Pepsin-HCl solution, Inlab Storage solution	24	-	•

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Portfolio Overview PerfectION Reference Electrolyte & ISA Solutions

Reference Electrolyte Solutions	Ions	Total shelf-life (months)	Packaging		
			Single bottle 475 mL	Single bottle 3,790 mL	Pack bottle 5 x 60 mL
Ion Electrolyte A	Calcium, fluoride, sulfide	36	-	-	•
Ion Electrolyte B	Chloride, cyanide, lead, silver, sulfide	36	-	-	•
Ion Electrolyte C	Silver	24	-	-	•
Ion Electrolyte D	Copper, iodide	36	-	-	•
Ion Electrolyte E	Potassium	36	-	-	•
Ion Electrolyte F	Nitrate	36	-	-	•
ISA Solutions					
ISA solid state ISE (chloride, copper, iodide, silver)		24	•	-	-
Calcium ISA	-	24	•	-	-
Potassium ISA	-	24	•	-	-
Nitrate ISA	-	24	•	-	-
Nitrate ISS (for suppressing interference)		24	-	•	-
Fluoride TISAB II with CDTA	-	36	•	-	-
Fluoride TISAB III with CDTA (concentrate)		36	•	-	-

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Portfolio Overview Ion Calibration Standards Solutions

	Total shelf-life (months)			Packaging		
	Concentration 1000 mg/L	Concentration 100 mg/L	Concentration 10 mg/L	Single bottle 500 mL; 1000 mg/L	Single bottle 500 mL; 100 mg/L	Single bottle 500 mL; 10 mg/L
Silver ISE standard	24	-	-	•	-	-
Calcium ISE standard	24	12	12	•	•	•
Chloride ISE standard	24	24	12	•	•	•
Copper ISE standard	24	-	-	•	-	-
Fluoride ISE standard	24	-	-	•	•	•
Iodide ISE standard	24	-	-	•	-	-
Potassium ISE standard	24	-	-	•	-	-
Sodium ISE standard	24	24	12	•	•	•
Ammonium ISE standard	24	12	-	•	•	-
Nitrate ISE standard	24	-	-	•	-	-
Lead ISE standard	24	-	-	•	-	-

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Portfolio Overview Redox & DX Solutions, DO Accessories

Redox Buffers	Total shelf-life (months)	Packaging			
		Single bottle 25 mL	Single bottle 250 mL	Sixpack bottles 6 x 250 mL	Sixpack bottles 6 x 30 mL
220 mV, pH 7 (UH = 427 mV)	24	-	•	•	-
468 mV, pH 0.1 (UH = 675 mV)	24	-	-	-	•
Bridge Electrolyte for DX					
3 mol/L KCl	36	•	•	•	-
1 mol/L KCl	36	•	-	-	-
1 mol/L KNO_3	36	•	•	•	-
ISA Solution for DX					
TISAB 3 solution, for fluoride determinations	24	-	•	-	-
0.9 mol/L $Al_2(SO_4)_3$ solution	36	-	•	-	-
DO Accessories					
Zero oxygen tablets	24			20 pieces	

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