

Laboratory Solutions



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pH Buffers

Conductivity Standards

Solutions for ORP and DO

Solutions for ISE

Maintenance Solutions



Solutions for Calibration & Care

Comprehensive Range of Indispensable Utilities

METTLER TOLEDO

Genie in a Bottle

a Full Pack of Competence

The determination of pH, conductivity, ion concentration, redox potential and dissolved oxygen are common analyses in most laboratories. The measurement accuracy highly depends on the quality and operation of the solutions used for sensor calibration and maintenance. METTLER TOLEDO takes pride in a long tradition of producing complete measurement systems, including a comprehensive range of top quality solutions.

Top sellers for the most common use



All METTLER TOLEDO calibration and cleaning solutions are available in handy bottles with no-fuss labels. If larger quantities are required, then our 6-packs are the right choice. Electrolytes come with special caps that make refilling your electrode a child's play.

Specialties for specific requirements



Using our sachets guarantees fresh solution for every calibration as well as maximum ease of use. Every sachet box comes with a printed certificate. Rely on METTLER TOLEDO's expertise to meet your specific needs with our expanded offering.

Maximum traceability and compliance



To guarantee maximum traceability, an individual test certificate exists for every calibration solution. Furthermore, compliance with regulations is key for us. All SDS and labels contain information according to GHS (Globally Harmonized System) in local languages. Simply download all required documents from our online database: www.mt.com/buffer



Good Electrochemistry Practice™ for calibration solutions

The quality of a solution is only guaranteed for unopened bottles that have not yet expired. The following tips shall help optimize the use of calibration solutions after opening and while in use in the laboratory. Fresh calibration solutions minimize the measurement uncertainty and thus optimize the reproducibility of results:

- Note the date on the bottle when the calibration solution is opened for the first time.
- Keep the bottles sealed tightly at all times and use any dispensed calibration solution promptly.
- Never pour dispensed calibration solution back into the original bottle.
- Ensure that bottles containing calibration solution are not contaminated.
- Store calibration solutions at ambient temperatures and avoid direct sunlight.
- Clean your sensors properly prior to calibration and do not calibrate directly in the original bottle (unless there is an instruction to do so).
- Replace calibration solutions that have reached the expiry date or may be contaminated.

► www.mt.com/GEP

pH Measurement Precision Starts with a Precise Calibration

pH measurements are only as accurate as the buffer solutions used for calibration purposes. METTLER TOLEDO offers a selection of quality pH buffers to match your specific requirements. No matter if you look for traceable technical buffers or buffers that are certified by an accredited body, you will find the right solution. Maximum precision is guaranteed with our NIST/DIN buffers!

Reliable all-rounders: Technical pH buffers



The internationally recognized pH scale is based on standard reference materials (SRM) selected by NIST (National Institute of Standards and Technology, USA). METTLER TOLEDO buffer solutions are traceable to these primary standards. The quality inspection certificate, that is available for every bottle and sachet, guarantees stated values and traceability.

Traceable to an accredited body: DKD certified buffers



The DKD (Deutscher Kalibrierdienst, German Calibration Service) certified buffers are the perfect product for regulated industries. DKD is accepted by other accreditation bodies within the scope of the European Cooperation for Accreditation (EA) and the International Laboratory Accreditation Cooperation (ILAC).

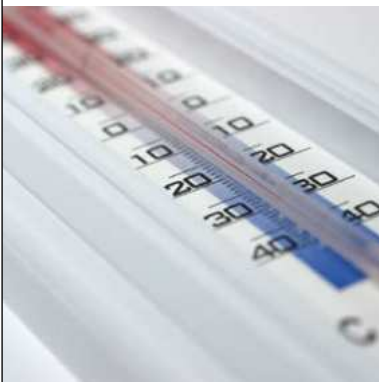
Top Precision: NIST/DIN 19266 buffers



The NIST/DIN pH buffers are specified to three decimal places, e.g. 9.180, offering the highest possible pH precision. A detailed test certificate is available for every bottle and guarantees the tested values and traceability. Calibration cannot get better than this!



Automatically compensated temperature



The pH value of a buffer solution changes with temperature. Several international standards state the pH values at different temperatures in steps of 5 °C. Thus, all METTLER TOLEDO buffer solutions come with a temperature table printed on the label. The same tables are stored in all METTLER TOLEDO pH meters which allows for easy automatic temperature compensation.



Good Electrochemistry Practice™ for reliable pH calibrations

pH electrodes must be calibrated regularly; at least once a day prior to measurements and after every cleaning, regeneration or long-term storage. The calibration adjusts slope and offset of an electrode to their true values. Since an electrode is characterized by both its slope and its offset, it is advisable to do a minimum of a two point calibration for reliable measurements and better precision. For a wider measurement range three or more calibration points are recommended. Important is that the following measurements are within the calibration range.

Optimal Care For Hard-Working pH Electrodes

The pH electrode is the main actor of the measurement, requiring, therefore, special care and attention. METTLER TOLEDO provides the necessary maintenance solutions. For an easy start the All-in-One kits offer an optimal selection of solutions for calibration and maintenance. Your electrode stays ready for whatever task is due. Reliable pH results guaranteed!

The right electrolyte for every application



Thanks to the ARGENTHAL™ reference system most METTLER TOLEDO pH sensors are filled with 3 mol/L KCl electrolyte solution. There is no more risk of contaminating your samples with silver ions. For measurements in non-aqueous samples or samples with low ionic strength a special bridge electrolyte is needed. Always make sure that your electrode is completely filled with clean electrolyte solution.

Maintenance solutions for peace of mind



When rinsing with deionized water is not sufficient, a special cleaning solution can be used to remove sample residues. Depending on the contamination, Pepsin-HCl or Thiourea is recommended. The InLab® storage solution provides optimal conditions for sensors during the time between measurements, be it short- or long-term storage. Find more helpful maintenance tips on www.electrodes.net.

Quick and easy performance verification



The VPac™ pH verification kit provides a quick and easy performance verification of your pH system. Measure two test solutions of unknown pH value and get an immediate online evaluation of your results including certificate! Never has it been easier to verify your system after installation or any setup change or simply for extra peace of mind. www.mt.com/pH-VPac



pH Buffers	pH value at 25 °C	Order number 250 mL	Order number 6 x 250 mL	Order number 30 sachets 20 mL	
Technical pH buffer solutions	2.00	51350002	51350016	30111134	
	4.01	51350004	51350018	51302069	
	7.00	51350006	51350020	51302047	
	9.21	51350008	51350022	51302070	
	10.00	51350010	51350024	51302079	
	11.00	51350012	51350026	30111135	
	Rainbow bottles I (3 x 2 bottles 250 mL 4.01 / 7.00 / 9.21)			30095312	
	Rainbow bottles II (3 x 2 bottles 250 mL 4.01 / 7.00 / 10.00)			30095313	
	Rainbow sachets I (3 x 10 sachets 20 mL 4.01 / 7.00 / 9.21)				51302068
Rainbow sachets II (3 x 10 sachets 20 mL 4.01 / 7.00 / 10.01)				51302080	
NIST/DIN pH buffer solutions	4.006	51350052		30111136	
	6.865	51350054		30111137	
	9.180	51350056		30111138	
	10.012	51350058		30111139	
Certified pH buffer solutions	4.01	51350032	51350042		
	7.00	51350034	51350044		
	9.21	51350036	51350046		
	10.00	51350038	51350048		

Electrolytes for reference electrodes	Order number 25 mL	Order number 250 mL	Order number 6 x 250 mL	Order number 6 x 30 mL
KCl-solution 3 mol/L for ARGENTHAL™ reference systems	51343180	51350072	51350080	
KCl-solution 3 mol/L, AgCl saturated, for Ag/AgCl reference systems	51343184	51350074	51350082	
FRISCOLYT-B®, for measurement at low temperature and for media with organic compounds (oil, proteins etc.)	51343185	51350076	51350084	
LiCl Solution 1 mol/L in ethanol, for measurement in non-aqueous media				51350088

Maintenance solutions	Order number 250 mL	Order number 6 x 250 mL	Order number 25 mL
Pepsin-HCl for cleaning junctions with protein contamination. Treatment time about 1 h.	51350100	30045061	
Thiourea solution for cleaning junctions with silver sulfide contamination. Treatment until discoloration.	51350102	30045062	
Reactivation solution for regeneration of glass electrodes. Treatment time about 1 min.			51350104
InLab® storage solution for pH and ORP electrodes	30111142		
pH All-in-One Kit I (pH buffer 4.01 / 7.00 / 9.21, 3 mol/L KCl, cleaning solution, storage solution)		30095314	
pH All-in-One Kit II (pH buffer 4.01 / 7.00 / 10.00, 3 mol/L KCl, cleaning solution, storage solution)		30095315	

	Order number 2 x 100 mL
VPac™ pH verification kit	30090849