

Certified Buffer and Standard Solutions

ISO reference materials to achieve your standards

DIN EN ISO 17034:2017 is the internationally most recognized accreditation to produce Certified Reference Materials (CRM). Since 2022 Hach provides ISO 17034 certified standards for pH and Conductivity.

The requirements included in the accreditation, guarantee to have control throughout the complete product life cycle. From raw materials, to production planning and control, traceability, stability studies, as well as packaging and documentation management—we care.

With that, those standards deliver the highest level of quality assurance possible to provide full confidence to the user.

Hach Lange GmbH is accredited by the German accreditation authority DAkkS as registered reference material producer according to DIN EN ISO 17034:2017. Compared to ISO 17025, ISO 17034 has an additional requirement for reliable and traceable manufacturing of products.

Be confident in your analysis

Hach's certified analytical standards are made in a way that they are completely reliable to ensure that your instruments are perfectly calibrated and deliver the most accurate results. A team of dedicated experts is ready to support your analysis and to provide technical documentation. You can save valuable time by using already prepared standard solutions that are produced and qualified on the highest level.

Quality assured

Hach standard solutions are certified for consistency, in accordance to the high standards in production, materials and quality control.



Order Information

S11M001	pH 1.679 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M002	pH 4.005 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M003	pH 6.865 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M004	pH 7.000 Certified Reference Material CRM Buffer Standard Solution, 500 mL
S11M005	pH 7.413 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M006-US	pH 9.180 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M007	pH 10.012 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M008	pH 12.45 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S51M001	111.3 mS/cm Certified Reference Material CRM OIML Conductivity Standard Solution, KCl 1D, 500 mL
S51M002	12.85 mS/cm Certified Reference Material CRM OIML Conductivity Standard Solution, KCl 0.1D, 500 mL

S51M003	1408 μ S/cm Certified Reference Material CRM OIML Conductivity Standard Solution, KCl 0.01D, 500 mL
S51M004	1015 μ S/cm Certified Reference Material CRM Conductivity Standard Solution, 0.05% NaCl, 500 mL
S51M013	25 μ S/cm Certified Reference Material CRM Conductivity Standard Solution, NaCl, 250 mL



Each 500 mL standard is delivered in an airtight aluminum bag package ensuring safe storage. Until first opening the certified value is guaranteed for 2 years from the date of issue of the certificate. The 250 mL standard comes in a glass bottle with 1 year shelf-life until opening.

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pH Buffers and Standard Solutions

pH Buffer Pillows

Buffers with pH values of 4.01, 7.00, and 10.01 are color-coded for added convenience. pH is ± 0.02 at 25 °C. Buffer pillows assure freshness and eliminate the possibility of contamination. Simply open the pillow and add the contents to 50 mL of deionized or demineralized water. Powder buffers assure accuracy (± 0.02 pH units) and are NIST traceable.

Prod. No.	Color-Coded	pH Value(s)	Quantity
2226995	Red	4.01 ± 0.02 pH at 25°C	15 pcs
2226966	Red	4.01 ± 0.02 pH at 25°C	50 pcs
2226964	Red	4.01 ± 0.02 pH at 25°C	250 pcs
2227095	Yellow	7.00 ± 0.02 pH at 25°C	15 pcs
2227066	Yellow	7.00 ± 0.02 pH at 25°C	50 pcs
2227064	Yellow	7.00 ± 0.02 pH at 25°C	250 pcs
2227195	Blue	10.01 ± 0.02 pH at 25°C	15 pcs
2227166	Blue	10.01 ± 0.02 pH at 25°C	50 pcs
2227164	Blue	10.01 ± 0.02 pH at 25°C	250 pcs
2299264	Red & Yellow	4.01 & 7.00 ± 0.02 pH at 25°C	30 pcs
1405566	Colorless	6.00 ± 0.02 pH at 25°C	50 pcs
1409895	Colorless	6.86 ± 0.02 pH at 25°C	15 pcs
1407995	Colorless	8.00 ± 0.02 pH at 25°C	15 pcs
1410766	Colorless	9.00 ± 0.02 pH at 25°C	50 pcs
2657364	pH Storage Solution Pillows		20 pcs

pH Buffer Solutions

Prod. No.	Color-Coded	pH Value(s)	Quantity
2283436	Red	4.01 ± 0.02 pH at 25°C	15 mL
2283426	Red	4.01 ± 0.02 pH at 25°C	50 mL
2283449	Red	4.01 ± 0.02 pH at 25°C	500 mL
2283456	Red	4.01 ± 0.02 pH at 25°C	4 L
2283461	Red	4.01 ± 0.02 pH at 25°C	20 L
2283536	Yellow	7.00 ± 0.02 pH at 25°C	15 mL
2283526	Yellow	7.00 ± 0.02 pH at 25°C	50 mL
2283549	Yellow	7.00 ± 0.02 pH at 25°C	500 mL
2283556	Yellow	7.00 ± 0.02 pH at 25°C	4 L
2283561	Yellow	7.00 ± 0.02 pH at 25°C	20 L
2283636	Blue	10.01 ± 0.02 pH at 25°C	15 mL
2283626	Blue	10.01 ± 0.02 pH at 25°C	50 mL
2283649	Blue	10.01 ± 0.02 pH at 25°C	500 mL
2283656	Blue	10.01 ± 0.02 pH at 25°C	4 L
2283661	Blue	10.01 ± 0.02 pH at 25°C	20 L
1222336	Colorless	4.01 ± 0.02 pH at 25°C	15 mL
1222349	Colorless	4.01 ± 0.02 pH at 25°C	500 mL
1222356	Colorless	4.01 ± 0.02 pH at 25°C	4 L
1222249	Colorless	7.00 ± 0.02 pH at 25°C	500 mL
1222256	Colorless	7.00 ± 0.02 pH at 25°C	4 L
1222149	Colorless	10.01 ± 0.02 pH at 25°C	500 mL
1222156	Colorless	10.01 ± 0.02 pH at 25°C	4 L
S11M009	Colorless	1.09 ± 0.02 pH at 25°C	500 mL
S11M010	Colorless	4.65 ± 0.02 pH at 25°C	500 mL
S11M011	Colorless	9.23 ± 0.02 pH at 25°C	500 mL

Save when you purchase pH Buffer 3-Packs!

2507300	Red, Yellow & Blue	4.01, 7.00 & 10.01 ± 0.02 pH at 25°C	3 pk of 20 L
2507200	Red, Yellow & Blue	4.01, 7.00 & 10.01 ± 0.02 pH at 25°C	3 pk of 4 L
2947600	Red, Yellow & Blue	4.01, 7.00 & 10.01 ± 0.02 pH at 25°C	3 pk of 500 mL

Singlet pH Solution Packs

Singlet single-use standard solutions are ideal for on-site analysis, eliminating the need to prepare standardized buffer solutions for pH and conductivity buffers or standard solutions without having to purchase and carry deionized or demineralized water. The convenient foil-pouch packaging maintains freshness, and keeps the solutions contaminant-free and ready to travel with you anywhere. pH is ± 0.02 at 25 °C.

2769820	Yellow & Blue	7.00 & 10.01 ± 0.02 pH at 25°C	20 pcs
2769920	Red & Yellow	4.01 & 7.00 ± 0.02 pH at 25°C	2 pks of 10 pcs
2770020	Red	4.01 ± 0.02 pH at 25°C	20 pcs
2770120	Yellow	7.00 ± 0.02 pH at 25°C	20 pcs
2770220	Blue	10.01 ± 0.02 pH at 25°C	20 pcs

Beakers

SM5010	Beaker for Electrode/Sensor Calibration, colourless, 30 mL, pk/80
SM5011	Beaker for pH Electrode Calibration, Red, 30 mL, pk/80
SM5012	Beaker for pH Electrode Calibration, Yellow, 30 mL, pk/80
SM5013	Beaker for pH Electrode Calibration, Blue, 30 mL, pk/80
SM5014	Beaker for pH Electrode Calibration, Green, 30 mL, pk/80



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Standard Solutions & Reagents

Storage and Cleaning Solutions

2756559	pH Storage Solution (3M Potassium Chloride), 50 mL
2756549	pH Storage Solution (3M Potassium Chloride), 500 mL
2965249	Electrode Cleaning Solution, 500 mL
2964349	ISFET Probe Cleaning Solution for proteins, 500 mL
2756526	pH Electrode Storage Solution, 50 mL pour-top
2964449	pH Electrode Rinse Solution, Non-ionic Surfactant, 500 mL
2975149	Acid Electrode Cleaning Solution, 500 mL
S16M001	Electrode Cleaning solution, RENOVO.N, for Clean Water Samples, 250 mL
S16M002	Electrode Cleaning solution, RENOVO.X extra strong, 250 mL
C20C370	Electrode Cleaning Solution for Proteins/Organics Samples, 250 mL
C20C380	Electrode Cleaning Solution for Porous Pin/Diaphragm Junction, 250 mL

BOD Nutrients and Seed Inoculum

1416066	BOD Nutrient Buffer Pillows, prepares 300 mL, 50/pk
1486166	BOD Nutrient Buffer Pillows, prepares 3 L, 50/pk
1486266	BOD Nutrient Buffer Pillows, prepares 6 L, 50/pk
1486398	BOD Nutrient Buffer Pillows, prepares 19 L, 25/pk
253335	Nitrification Inhibitor for BOD, formula 2533, TCMP, 35 g
253334	Nitrification Inhibitor for BOD, formula 2533, TCMP, 500 g
2918700	BOD Seed Inoculum, Polyseed, 50 capsules

KCl Conductivity Standards

50 mL

2974226	74.55 mg/L (0.0001M) KCl (146.9 μ S/cm), 50 mL pour-top
2974326	745.5 mg/L (0.01M) KCl (1412 μ S/cm), 50 mL pour-top
2974426	7455 mg/L (0.1M) KCl (12.89 mS/cm), 50 mL pour-top

500 mL

C20C250	12.88 mS/cm \pm 1% KCl (0.1M), 500 mL
C20C270	1413 μ S/cm \pm 1% KCl (0.01M), 500 mL
C20C280	146.9 μ S/cm \pm 2.5% KCl (0.001M), 500 mL
2974249	74.55 mg/L (0.001M) KCl (146.9 μ S/cm), 500 mL
2974349	745.5 mg/L (0.01M) KCl (1412 μ S/cm), 500 mL
2974449	7455 mg/L (0.1M) KCl (12.89 mS/cm), 500 mL
2714349	35 g/L KCl (53.0 mS/cm), 35 ppt Salinity, 500 mL

NaCl Conductivity Standards

50 mL

2971826	49 mg/L NaCl (100 μ S/cm), 50 mL pour-top
1440026	491 mg/L NaCl (1000 μ S/cm), 50 mL pour-top
2972226	5.37 g/L NaCl (10,000 μ S/cm), 50 mL pour-top
2307426	10,246 mg/L NaCl (18,000 μ S/cm), 50 mL pour-top

100 mL

210542	1990 μ S/cm, NaCl, 100 mL
2307542	85.47 mg/L NaCl, (180 μ S/cm), 100 mL
1440042	491 mg/L NaCl, (1000 μ S/cm), 100 mL
2307442	10,246 mg/L NaCl, (18,000 μ S/cm), 100 mL

500 mL

2971849	49 mg/L NaCl, (100 μ S/cm), 500 mL
1440049	491 mg/L NaCl (1000 μ S/cm), 500 mL
2972249	5366 mg/L NaCl, (10,000 μ S/cm), 500 mL

Natural Water Conductivity Solutions

2974826	442-3000 Natural Water Standard Solution, 3000 ppm TDS (3960 μ S/cm), 50 mL pour-top
2974549	442-30 Natural Water Standard Solution, 30 ppm TDS (46.7 μ S/cm), 500 mL
2974649	442-300 Natural Water Standard Solution, 300 ppm TDS (445 μ S/cm), 500 mL
2974749	442-1000 Natural Water Standard Solution, 1000 ppm TDS (1417 μ S/cm), 500 mL
2974849	442-3000 Natural Water Standard Solution, 3000 ppm TDS (3960 μ S/cm), 500 mL

ORP Standards and Solutions

2316949	ZoBell's Standard Solution, 500 mL
2612520	Light's Standard Solution in sealed ampules, 25/pk
2965349	Reducing Solution for ORP Electrodes For use with reducing (negative mV) sample matrices

Electrode Filling Solutions and Cartridges

25118049	Red Rod Filling Solution, Saturated KCl, 500 mL
25118026	Red Rod Filling Solution, Saturated KCl, 59 mL
2546902	KCl Reference Electrolyte Gel Cartridges, 2/pk
2965026	PHC281 Filling Solution, 2.44 M Viscous KCl, 59 mL
2965126	ISENA381 Filling Solution, 0.02 M NH_4Cl , 59 mL
2841700	MTC301 and PHC301 Filling Solution, 3.0 M KCl with Ag/Cl, 28 mL

Calcium Standard Solutions

2305442	10 mg/L Ca, 100 mL
4457649	100 mg/L Ca, 500 mL
2240349	1000 mg/L Ca, 500 mL

Chloride Standard Solutions

2370853	100 mg/L Cl^- , 1 L
18349	1000 mg/L Cl^- , 500 mL

Fluoride Standard Solutions (NIST) + ISA

40505	0.5 mg/L F, 500 mL
29149	1.0 mg/L F, 500 mL
29153	1.0 mg/L F, 1 L
40520	2.0 mg/L F, 500 mL
2797149	5.0 mg/L F, 500 mL
35949	10 mg/L F, 500 mL
23249	100 mg/L F, 500 mL
258901	Fluoride Ionic Strength Adjustor (ISA), Powder, 454 g
258999	Fluoride Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk
2829017	Fluoride Ionic Strength Adjustor (ISA), 3.78 L

Nitrogen-Ammonia Standard Solutions + ISA

189149	1 mg/L as $\text{NH}_3\text{-N}$, 500 mL
15349	10 mg/L as $\text{NH}_3\text{-N}$, 500 mL
1479120	50 mg/L as $\text{NH}_3\text{-N}$, 20x 2-mL PourRite Ampules
1479110	50 mg/L as $\text{NH}_3\text{-N}$, 16x 10-mL Voluette Ampules
2406549	100 mg/L as $\text{NH}_3\text{-N}$, 500 mL
4447169	Ammonia Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk

Nitrogen-Nitrate Standard Solutions + ISA

204649	1 mg/L as $\text{NO}_3\text{-N}$, 500 mL
2557810	5 mg/L as $\text{NO}_3\text{-N}$, 16x 10-mL Voluette Ampules
30749	10 mg/L as $\text{NO}_3\text{-N}$, 500 mL
2415132	15 mg/L as $\text{NO}_3\text{-N}$, 100 mL
194749	100 mg/L as $\text{NO}_3\text{-N}$, 500 mL
1426010	500 mg/L as $\text{NO}_3\text{-N}$, 16x 10-mL Voluette Ampules
1279249	1000 mg/L as $\text{NO}_3\text{-N}$, 500 mL
4456369	Nitrate Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk

Potassium Standard Solution

2351749	100 mg/L K^+ , 500 mL
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Sodium Electrode Storage Solution

4451659	Sodium Electrode Storage Solution, 50 mL
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Sodium Standard Solutions + ISA

2835153	10 mg/L Na^+ , 1 L
2318153	100 mg/L Na^+ , 1 L (NIST)
1474949	1000 mg/L Na^+ , 500 mL (NIST)
4451569	Sodium Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk