

pH Technical Calibration Solutions



Technical Solutions (± 0.01 pH) for Each Point of the pH Scale

To obtain precise and valid pH measurements, the pH meter and electrode must be calibrated at a minimum of two different points, close to the value of the sample to be tested. For this type of calibration, Hanna offers technical solutions for each point of the pH scale.

This complete scale of buffer solutions offers a higher degree of accuracy for pH measurements in specific areas of application, as in monitoring the pH of must and wine. This line includes twenty solutions starting from a value of pH 1.00 up to pH 13.00 with an accuracy of ± 0.01 pH, thus covering every point of the pH scale.

These solutions are dedicated to applications that require extremely accurate pH monitoring, and come with a certificate of analysis prepared by comparison against NIST standards.

Also available are solution bottles that are colored according to a given standard calibration value: HI5004-R (Red), HI5007-G (Green) and HI5010-V (Violet).

Easy to Use Single Dose Sachets

For the highest level of reliability of field instrumentation, technical solutions are available in convenient single dose sachets in 10 or 25 pack quantities.

Hanna Combination Kits in Bottles

Use our combination kits for easy ordering and reordering.

Code	Solutions (pH Value @25°C)	Bottle
HI54710	pH 4.01, pH 7.01, pH 10.01	500 mL (3)
HI54710-10	pH 4.01, pH 7.01, pH 10.01, HI70300L	500 mL (4)
HI54710-11	pH 4.01, pH 7.01, pH 10.01, HI70300L, HI7061L	500 mL (5)

Bottles

pH Value @25°C	Code	Package
1.00	HI5001	500 mL
1.68	HI5016	500 mL
2.00	HI5002	500 mL
2.00	HI5002-01	1 L
3.00	HI5003	500 mL
4.01	HI5004	500 mL
4.01	HI5004-01	1 L
4.01	HI5004-R	500 mL (color coded bottle)
4.01	HI5004-R08	1 G (3.78 L) (2) (color coded bottle)
5.00	HI5005	500 mL
5.00	HI5005-01	1 L
6.00	HI5006	500 mL
6.86	HI5068	500 mL
7.01	HI5007	500 mL
7.01	HI5007-01	1 L
7.01	HI5007-G	500 mL (color coded bottle)
7.01	HI5007-G08	1 G (3.78 L) (2) (color coded bottle)
7.41	HI5074	500 mL
8.00	HI5008	500 mL
8.00	HI5008-01	1 L
9.00	HI5009	500 mL
9.18	HI5091	500 mL
10.01	HI5010	500 mL
10.01	HI5010-01	1 L
10.01	HI5010-V	500 mL (color coded bottle)
10.01	HI5010-V08	1 G (3.78 L) (2) (color coded bottle)
11.00	HI5011	500 mL
12.00	HI5012	500 mL
12.45	HI5124	500 mL
13.00	HI5013	500 mL

Sachets

pH Value @25°C	Code	Package
1.00	HI50001-02	20 mL (25)
1.68	HI50016-01	20 mL (10)
1.68	HI50016-02	20 mL (25)
2.00	HI50002-02	20 mL (25)
3.00	HI50003-02	20 mL (25)
4.01	HI50004-01	20 mL (10)
4.01	HI50004-02	20 mL (25)
5.00	HI50005-02	20 mL (25)
6.86	HI50068-02	20 mL (25)
7.01	HI50007-01	20 mL (10)
7.01	HI50007-02	20 mL (25)
9.00	HI50009-02	20 mL (25)
9.18	HI50091-02	20 mL (25)
10.01	HI50010-01	20 mL (10)
10.01	HI50010-02	20 mL (25)
11.00	HI50011-02	20 mL (25)
12.00	HI50012-01	20 mL (10)
12.00	HI50012-02	20 mL (25)
12.45	HI50124-02	20 mL (25)
13.00	HI50013-02	20 mL (25)

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Bottles

pH Value @25°C	Code	Package
1.000	HI6001	500 mL
1.679	HI6016	500 mL
2.000	HI6002	500 mL
3.000	HI6003	500 mL
4.010	HI6004	500 mL
4.010	HI6004-01	1L
6.000	HI6006	500 mL
6.862	HI6068	500 mL
7.010	HI6007	500 mL
7.010	HI6007-01	1L
7.413	HI6074	500 mL
8.000	HI6008	500 mL
9.000	HI6009	500 mL
9.177	HI6091	500 mL
10.010	HI6010	500 mL
10.010	HI6010-01	1L
12.000	HI6012	500 mL
12.450	HI6124	500 mL
13.000	HI6013	500 mL

Sachets

pH Value @25°C	Code	Package
1.000	HI60001-02	20 mL (25)
1.679	HI60016-02	20 mL (25)
2.000	HI60002-02	20 mL (25)
4.010	HI60004-02	20 mL (25)
7.010	HI60007-02	20 mL (25)
10.010	HI60010-02	20 mL (25)

HI6000 Series

±0.002 pH Millesimal Calibration Solutions

Millesimal Calibration Solutions

The HI60XX line of buffers with millesimal accuracy (± 0.002 pH) has been prepared to meet the increasing need for assured accuracy in pH measurements. Each bottle of the series HI60XX is provided with a certificate of analysis, prepared by comparison with NIST standards.

Easy Range Identification

The colors on the HI60XX series packaging correspond to a given standard pH value. They make it easy and safe to identify the buffers to be used.

Millesimal Calibration Solution Sachets

This series is also available in handy sachets to perform accurate calibrations on-site or in the field. Single dose sachet solutions are safe, easy to carry and always fresh.



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pH Standard Calibration Solutions

1.68 pH Buffer Solution

Plating bath samples, food samples and waste samples are often acidic in nature. To increase accuracy of your measurement at lower pH values, it is important to calibrate your electrode and meter at the appropriate pH also. Hanna pH 1.68 buffer is available to fulfill this requirement. pH 1.68 buffer solution allows you to calibrate your measurement system in the acidic pH range and bracket your samples by using a second value at 4.01 pH or near 7.01 pH.

Our millesimal series offers ± 0.002 certified accuracy and our HI5016 technical grade solution offers ± 0.01 pH certified accuracy. Standard NIST traceable (no certification included) 1.68 pH buffer with ± 0.01 pH accuracy is available in two sizes.

4.01 pH Buffer Solution

Hanna buffer solutions are prepared according to precise formulas and are standardized with a pH electrode and meter calibrated with NIST standards. This buffer value is widely used in water purification plants, in the food industry and wherever the pH is expected to be slightly acidic.

All pH 4.01 solutions show batch number, expiration date and the correlation table between pH and temperature.

6.86 pH Buffer Solution

Many of our portable and benchtop instruments may now be calibrated with both pH 6.86 or pH 7.01 buffers.

The Hanna range of pH 6.86 buffer solutions has been expanded and stability has been improved to match the stability of pH 7.01.

1.68 pH @ 25°C - Bottles

Code	Size	Certificate of Analysis
HI7001L	500 mL	on request
HI7001M	230 mL	on request

4.01 pH @ 25°C - Bottles

Code	Size	FDA Bottle	Certificate of Analysis
HI7004/1G	1 G (3.78 L) (color coded bottle)		on request
HI7004/1L	1 L (color coded bottle)		on request
HI7004L	500 mL		on request
HI7004L/C	500 mL		•
HI7004M	230 mL		on request
HI8004L	500 mL	•	•
HI8004L/C	500 mL	•	•

4.01 pH @ 25°C - Sachets

Code	Size	Package	Certificate of Analysis
HI70004C	20 mL	25 pcs.	•
HI70004P	20 mL	25 pcs.	
HI7004P/5	20 mL	500 pcs.	

4.01 and 7.01 pH @ 25°C - Sachets

Code	Size	Package	Certificate of Analysis
HI77400C	20 mL	10 pcs., 5 ea	•
HI77400P	20 mL	10 pcs., 5 ea	

6.86 pH @ 25°C - Bottles

Code	Size	FDA Bottle	Certificate of Analysis
HI7006/1G	1 G (3.78 L)		on request
HI7006/1L	1 L		on request
HI7006L	500 mL		on request
HI7006L/C	500 mL		•
HI7006M	230 mL		on request
HI8006L	500 mL	•	•
HI8006L/C	500 mL	•	•

6.86 pH @ 25°C - Sachets

Code	Size	Package	Certificate of Analysis
HI70006C	20 mL	25 pcs.	•
HI70006P	20 mL	25 pcs.	



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7.01 pH @ 25°C - Bottles

Code	Size	FDA Bottle	Certificate of Analysis
HI7007/1G	1 G (3.78 L) (color coded bottle)		on request
HI7007/1L	1 L (color coded bottle)		on request
HI7007L	500 mL		on request
HI7007L/C	500 mL	•	•
HI7007M	230 mL		on request
HI8007L	500 mL	•	•
HI8007L/C	500 mL	•	•

7.01 pH @ 25°C, and Combination Packs - Sachets

Code	Value	Size	Package	Certificate of Analysis
HI70007C	7.01 pH	20 mL	25 pcs.	•
HI70007P	7.01 pH	20 mL	25 pcs.	
HI77700P	7.01 pH	20 mL	10 pcs.	
HI770710C	10.01 & 7.01 pH	20 mL	10 pcs., 5 ea	•
HI770710P	10.01 & 7.01 pH	20 mL	10 pcs., 5 ea	
HI77100C	1413 µS/cm & 7.01 pH	20 mL	20 pcs., 10 ea	•
HI77100P	1413 µS/cm & 7.01 pH	20 mL	20 pcs., 10 ea	
HI77200P	1500 mg/L (ppm) & 7.01 pH	20 mL	20 pcs., 10 ea	
HI77300C	1382 mg/L (ppm) & 7.01 pH	20 mL	20 pcs., 10 ea	•
HI77400P	4.01 & 7.01 pH	20 mL	10 pcs., 5 ea	

8.20 pH @ 25°C - Bottle

Code	Size	Package
HI70082M	230 mL	bottle

9.18 pH @ 25°C - Bottles

Code	Size	FDA Bottle	Certificate of Analysis
HI7009/1G	1 G (3.78 L)		on request
HI7009/1L	1 L		on request
HI7009L	500 mL		on request
HI7009L/C	500 mL	•	•
HI7009M	230 mL		on request
HI8009L/C	500 mL	•	•
HI8009L	500 mL	•	•

9.18 pH @ 25°C - Sachets

Code	Size	Package	Certificate of Analysis
HI70009C	20 mL	25 pcs.	•
HI70009P	20 mL	25 pcs.	

pH Standard Calibration Solutions

7.01 pH Buffer Solution

pH 7.01 is the most widely used among all buffer solutions. For this reason we have prepared it in a wider variety of sizes to meet application demand.

8.20 pH Buffer Solution

To increase accuracy of your measurement, Hanna offers the 8.20 pH buffer solution. The label indicates the batch code, expiration data and pH/temperature correlation table.

9.18 pH Buffer Solution

To increase accuracy of your measurement in an alkaline environment, it is important to calibrate your electrode and meter in that pH range and to preferably bracket your sample values. Hanna offers both pH 9.18 buffer and pH 10.01 buffer to fulfill this requirement.

FDA approved bottle

For maximum reliability choose our solutions in bottles that meet FDA standards (US Food & Drug Administration) which protect the solutions from extended exposure to light.

Traceability with NIST Standard Reference

Hanna pH buffers are carefully prepared using the highest quality ingredients available and are standardized with high precision meters calibrated to NIST references.



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pH Standard Calibration Solutions

10.01 pH Buffer Solution

pH 10.01 solution is commonly used to calibrate equipment used for analyzing basic samples. pH 10.01 buffer solution is available in various sizes to best fit your needs



10.01 pH @ 25°C - Bottles

Code	Size	FDA Bottle	Certificate of Analysis
HI7010/1G	1G (3.78 L) (color coded bottle)		on request
HI7010/1L	1L (color coded bottle)		on request
HI7010L	500 mL		on request
HI7010L/C	500 mL		•
HI7010M	230 mL		on request
HI8010L	500 mL	•	•
HI8010L/C	500 mL	•	•

10.01 pH @ 25°C, and Combination Packs - Sachets

Code	pH Value	Size	Package	Certificate of Analysis
HI70010C	10.01	20 mL	25 pcs.	•
HI70010P	10.01	20 mL	25 pcs.	
HI70010P/5	10.01	20 mL	500 pcs.	
HI770710C	10.01 & 7.01	20 mL	10 pcs., 5 ea	•
HI770710P	10.01 & 7.01	20 mL	10 pcs., 5 ea	

ORP and Sample Preparation Solutions

ORP standard solutions allows users to test the precision of ORP electrodes. For example, by immersing the electrode in HI7020 solution, readings should fall within the 200 to 275 mV range (@25°C/77°F).

If the reading is outside the indicated interval, clean and condition your ORP electrode in Hanna pretreatment solution.

Use HI7092 for oxidizing or HI7091 for reducing pretreatment.



ORP Test and Pretreatment Solution Bottles

Code	Description	Size	Certificate of Analysis
HI7020L	ORP test solution @200 to 275 mV (@25°C)	500 mL	on request
HI7020M	ORP test solution @200 to 275 mV (@25°C)	230 mL	on request
HI7021L	ORP test solution @240 mV (@25°C)	500 mL	on request
HI7021M	ORP test solution @240 mV (@25°C)	230 mL	on request
HI7022L	ORP test solution @470 mV (@25°C)	500 mL	on request
HI7022M	ORP test solution @470 mV (@25°C)	230 mL	on request
HI7091L	reducing pretreatment solution	500 mL + 14g (set)	
HI7092L	oxidizing pretreatment solution	500 mL	
HI7092M	oxidizing pretreatment solution	230 mL	

Sample Preparation Solution Bottles

Code	Description	Size
HI7051M	soil sample preparation solution	230 mL
HI7051L	soil sample preparation solution	500 mL
HI70960	preparation solution for solid or semi-solid samples	30 mL

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ORP Solution Bottles

Code	Description	Size	Certificate of Analysis
HI 7020L	ORP test solution @200 to 275 mV (@25°C)	500 mL	on request
HI 7020M	ORP test solution @200 to 275 mV (@25°C)	230 mL	on request
HI 7021L	ORP test solution @240 mV (@25°C)	500 mL	on request
HI 7021M	ORP test solution @240 mV (@25°C)	230 mL	on request
HI 7022L	ORP test solution @470 mV (@25°C)	500 mL	on request
HI 7022M	ORP test solution @470 mV (@25°C)	230 mL	on request
HI 7091L	reducing pretreatment solution	500 mL	
HI 7091M	reducing pretreatment solution	230 mL	
HI 7092L	oxidizing pretreatment solution	500 mL	
HI 7092M	oxidizing pretreatment solution	230 mL	

ISE Standards

Code	Description	Size
HI 4001-01	0.1 M ammonia std.	500 mL
HI 4001-02	100 mg/L (ppm) ammonia std. (as N)	500 mL
HI 4001-03	1000 mg/L (ppm) ammonia std. (as N)	500 mL
HI 4002-01	0.1 M bromide std.	500 mL
HI 4003-01	0.1 M cadmium std.	500 mL
HI 4004-01	0.1 M calcium std.	500 mL
HI 4005-01	0.1 M carbon dioxide std.	500 mL
HI 4005-03	1000 mg/L (ppm) carbon dioxide std. (as CaCO ₃)	500 mL
HI 4007-01	0.1 M chloride std.	500 mL
HI 4007-02	100 mg/L (ppm) chloride std.	500 mL
HI 4007-03	1000 mg/L (ppm) chloride std.	500 mL
HI 4008-01	0.1 M cupric std.	500 mL
HI 4010-01	0.1 M fluoride std.	500 mL
HI 4010-02	100 mg/L (ppm) fluoride std.	500 mL
HI 4010-03	1000 mg/L (ppm) fluoride std.	500 mL
HI 4010-10	10 mg/L (ppm) fluoride std. premixed with TISAB II	500 mL
HI 4010-11	1 mg/L (ppm) fluoride std. premixed with TISAB II	500 mL
HI 4010-12	2 mg/L (ppm) fluoride std. premixed with TISAB II	500 mL
HI 4010-30	Kit containing 4 bottles each of : HI 4010-10, HI 4010-11 and HI 4010-00	500 mL (3 x 4)
HI 4011-01	0.1 M iodide std.	500 mL
HI 4012-01	0.1 M lead std.	500 mL
HI 4012-21	0.1 M sulfate std.	500 mL
HI 4013-01	0.1 M nitrate std.	500 mL
HI 4013-02	100 mg/L (ppm) nitrate std. (as N)	500 mL
HI 4013-03	1000 mg/L (ppm) nitrate std. (as N)	500 mL
HI 4014-01	0.1 M potassium std.	500 mL
HI 4015-01	0.1 M silver std.	500 mL
HI 4016-01	0.1 M sodium standard	500 mL
HI 4016-02	100 ppm sodium standard	500 mL
HI 4016-03	1000 ppm sodium standard	500 mL
HI 4016-10	10 ppm sodium standard	500 mL

Specific "Solutions" for ISE Sensors

Code	Description	Size
HI 4000-47	pH 4 and pH 7 buffers with chloride background. Used to check glass internal of gas sensors.	10 packages ea. and 2 beakers
HI 4001-45	conditioning and storage solution for HI 4101 ammonia ISE	500 mL
HI 4004-45	conditioning and storage solution for HI 4004 and HI 4104 calcium ISE's	500 mL
HI 4005-45	conditioning and storage solution for HI 4105 carbon dioxide ISE	500 mL
HI 4016-45	storage solution for sodium ISE	500 mL
HI 4016-46	conditioning solution for sodium ISE	500 mL

Gas Fill Sensors

Code	Description	Size
HI 4001-40	ammonia filling solution	30 mL bottles (4)
HI 4005-40	carbon dioxide filling solution	30 mL bottles (4)

ORP Solutions & ISE Solutions

ORP Solutions

ORP standard solutions allows users to test the precision of ORP electrodes. For example, by immersing the electrode in HI 7020 solution, readings should fall within the 200 to 275 mV range (@20°C/68°F).

If the reading is outside the indicated value, clean and condition your ORP electrode in Hanna pretreatment solution. Use HI 7092 for oxidizing or HI 7091 for reducing pretreatment.

ISE Standards

Our wide selection of Hanna ISE Standards are made and bottled in our own state of the art solutions facility. ISE Standards are required for direct and incremental measurement techniques and are supplied with certificate of analysis.



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EC Calibration Solutions

Quality Solutions for Laboratory Applications

- **Guaranteed quality**
 - Each label shows the production batch number, expiration date and conductivity/temperature correlation table.
- **Certified solutions available**
- **FDA compliant bottles**
 - Opaque, light-tight bottles that meet FDA standards (HI80XX)

84 $\mu\text{S}/\text{cm}$ Calibration Solution

This 84 $\mu\text{S}/\text{cm}$ conductivity solution makes it possible to calibrate instruments with a conductivity scale of up to 200 $\mu\text{S}/\text{cm}$, in the measurement of pure or distilled water.

Using our single-dose 20 mL solution sachets guarantees freshness for every calibration.

1413 $\mu\text{S}/\text{cm}$ Calibration Solution

The 1413 $\mu\text{S}/\text{cm}$ calibration solution is best suited for general use. This solution is also available in combined sachet kits with Hanna pH 7 buffer for easy calibration of multiparameter instruments.

This solution is also available in different sized bottles and in single dose, ready to use sachets.

The HI8031L solution is provided in an opaque bottle according to FDA (Food & Drug Administration) regulations, which prevents the reagent from damage due to extended exposure to light.

Our wide range of calibration solutions also includes solutions provided with a certificate of analysis to satisfy the requirements of any application from the farm to the factory.



84 $\mu\text{S}/\text{cm}$ Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI6033	84 $\mu\text{S}/\text{cm}$	500 mL	1 bottle		•
HI7033L	84 $\mu\text{S}/\text{cm}$	500 mL	1 bottle		
HI7033M	84 $\mu\text{S}/\text{cm}$	230 mL	1 bottle		
HI8033L	84 $\mu\text{S}/\text{cm}$	500 mL	1 bottle	•	•

1413 $\mu\text{S}/\text{cm}$ Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI6031	1413 $\mu\text{S}/\text{cm}$	500 mL	1 bottle		•
HI7031/1G	1413 $\mu\text{S}/\text{cm}$	1 G (3.78 L)	1 bottle		
HI7031L	1413 $\mu\text{S}/\text{cm}$	500 mL	1 bottle		
HI7031L/C	1413 $\mu\text{S}/\text{cm}$	500 mL	1 bottle		•
HI7031M	1413 $\mu\text{S}/\text{cm}$	230 mL	1 bottle		
HI8031L	1413 $\mu\text{S}/\text{cm}$	500 mL	1 bottle	•	•

1413 $\mu\text{S}/\text{cm}$ Sachets

Code	EC Value @25°C	Size	Package	Certificate of Analysis
HI70031C	1413 $\mu\text{S}/\text{cm}$	20 mL	25 sachets	•
HI70031P	1413 $\mu\text{S}/\text{cm}$	20 mL	25 sachets	
HI77100C	1413 $\mu\text{S}/\text{cm}$ & pH 7.01	20 mL	20 sachets (10 ea)	•
HI77100P	1413 $\mu\text{S}/\text{cm}$ & pH 7.01	20 mL	20 sachets (10 ea)	

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EC Calibration Solutions

Quality Solutions for Laboratory Applications

- **Guaranteed quality**
 - Each label shows the production batch number, expiration date and conductivity/temperature correlation table.
- **Certified solutions available**
- **FDA compliant bottles**
 - Opaque, light-tight bottles that meet FDA standards (HI80XX)

5000 $\mu\text{S}/\text{cm}$ Calibration Solution

This calibration solution is ideal for applications that need to achieve higher reading accuracies in a conductivity scale between 2,000 $\mu\text{S}/\text{cm}$ and 10,000 $\mu\text{S}/\text{cm}$. This solution is widely used in agriculture for monitoring and preparing nutrient solutions for proper crop production.

Hanna has produced a 5000 $\mu\text{S}/\text{cm}$ calibration solution that is available in a wide range of sizes and packages to suit every application.

12880 $\mu\text{S}/\text{cm}$ Calibration Solution

The 12880 $\mu\text{S}/\text{cm}$ (12.88 mS/cm) calibration solution is widely used to assure the proper performance of conductivity meters with a scale higher than 10 mS/cm.

This solution is used mainly for industrial applications and is available in various sizes to better meet user requirements.



5000 $\mu\text{S}/\text{cm}$ Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7039L	5000 $\mu\text{S}/\text{cm}$	500 mL	1 bottle		
HI7039M	5000 $\mu\text{S}/\text{cm}$	230 mL	1 bottle		
HI8039L	5000 $\mu\text{S}/\text{cm}$	500 mL	1 bottle	•	•

5000 $\mu\text{S}/\text{cm}$ Sachets

Code	EC Value @25°C	Size	Package	Certificate of Analysis
HI70039C	5000 $\mu\text{S}/\text{cm}$	20 mL	25 sachets	•
HI70039P	5000 $\mu\text{S}/\text{cm}$	20 mL	25 sachets	

12880 $\mu\text{S}/\text{cm}$ Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7030/1G	12880 $\mu\text{S}/\text{cm}$	1 G (3.78 L)	1 bottle		
HI7030L	12880 $\mu\text{S}/\text{cm}$	500 mL	1 bottle		
HI7030M	12880 $\mu\text{S}/\text{cm}$	230 mL	1 bottle		
HI8030L	12880 $\mu\text{S}/\text{cm}$	500 mL	1 bottle	•	•

12880 $\mu\text{S}/\text{cm}$ Sachets

Code	EC Value @25°C	Size	Package	Certificate of Analysis
HI70030C	12880 $\mu\text{S}/\text{cm}$	20 mL	25 sachets	•
HI70030P	12880 $\mu\text{S}/\text{cm}$	20 mL	25 sachets	

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Quality Solutions for Laboratory Applications

- **Guaranteed quality**
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- **Certified solutions available**
- **FDA compliant bottles**
 - Opaque, light-tight bottles that meet FDA standards (HI80XX)

80000 $\mu\text{S/cm}$ Calibration Solution

The 80,000 $\mu\text{S/cm}$ calibration solution is needed for the proper calibration of instrumentation used to measure high conductivity samples such as wastewater, solutions with suspended solids and plating baths.

It is available in two different sizes and also in an FDA approved light shielded bottle.

This calibration solution is also ideal for use in the agroalimentary sector.

111800 $\mu\text{S/cm}$ Calibration Solution

This calibration solution is useful to calibrate instrumentation used to measure samples with conductivity higher than 100 mS/cm (100,000 $\mu\text{S/cm}$).

In fact, this solution makes it possible to calibrate instruments that perform under conditions of high salt concentrations.

This calibration solution is ideal for use in systems where phase limits have to be detected (e.g. separation of a substance from water), monitoring of bottle washing plants, beverage controls, check of acids or bases in electrodeposition processes and some plating baths.



80000 $\mu\text{S/cm}$ Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7034L	80000 $\mu\text{S/cm}$	500 mL	1 bottle		
HI7034M	80000 $\mu\text{S/cm}$	230 mL	1 bottle		
HI8034L	80000 $\mu\text{S/cm}$	500 mL	1 bottle	•	•

111800 $\mu\text{S/cm}$ Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7035L	111800 $\mu\text{S/cm}$	500 mL	1 bottle		
HI7035M	111800 $\mu\text{S/cm}$	230 mL	1 bottle		
HI8035L	111800 $\mu\text{S/cm}$	500 mL	1 bottle	•	•

ติดต่อบริษัท เนอนิคส์ จำกัด

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TDS Calibration Solutions

Quality Solutions for Laboratory Applications

TDS Solutions

Hanna is one of the few producers to offer calibration solutions in packages from 20 to 500 mg/L for lab and field applications. Our packaging has been designed to keep air and light from damaging the solution.

Safety Data Sheets

The safety data sheets for all Hanna solutions in this catalog are available at www.hannainst.com or upon request.

Expiration Date

The production batch number and the expiration date are reported on all Hanna calibration solutions.

NIST Traceability

TDS solutions are produced with high-quality potassium chloride in various concentrations. They are standardized using a conductivity meter calibrated with NIST potassium chloride.



TDS Bottles

Code	TDS Value @25°C	Size	Package	Certificate of Analysis
HI6032	1382 mg/L (ppm)	500 mL	1 bottle	•
HI7032L	1382 mg/L (ppm)	500 mL	1 bottle	
HI7032M	1382 mg/L (ppm)	230 mL	1 bottle	
HI7036L	12.41 g/L (ppt)	500 mL	1 bottle	
HI7036M	12.41 g/L (ppt)	230 mL	1 bottle	
HI70442L*	1500 mg/L (ppm)	500 mL	1 bottle	
HI70442M*	1500 mg/L (ppm)	230 mL	1 bottle	

TDS Sachets

Code	TDS Value @25°C	Size	Package	Certificate of Analysis
HI70032C	1382 mg/L (ppm)	20 mL	25 sachets	•
HI70032P	1382 mg/L (ppm)	20 mL	25 sachets	
HI70038C	6.44 g/L (ppt)	20 mL	25 sachets	•
HI70038P	6.44 g/L (ppt)	20 mL	25 sachets	
HI70080C	800 mg/L (ppm)	20 mL	25 sachets	•
HI70080P	800 mg/L (ppm)	20 mL	25 sachets	
HI70442C*	1500 mg/L (ppm)	20 mL	25 sachets	•
HI70442P*	1500 mg/L (ppm)	20 mL	25 sachets	
HI77200C	1500 mg/L (ppm) & pH 7.01	20 mL	20 sachets (10 ea)	•
HI77200P*	1500 mg/L (ppm) & pH 7.01	20 mL	20 sachets (10 ea)	

* TDS Conversion Factor 4-4-2: 0.65 ppm = 1 µS/cm (approximately).

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Salinity Calibration Solutions

Salinity Bottles

Code	Description	Size	Package
HI7037L	Salinity solution	500 mL	1 bottle
HI7037M	Salinity solution	230 mL	1 bottle

Sodium Chloride (NaCl) Standard Solutions

Code	Description	Package
HI 7080L	standard solution at 2.3 g/L Na ⁺	500 mL bottle
HI 7080M	standard solution at 2.3 g/L Na ⁺	230 mL bottle
HI 7086L	standard solution at 23 g/L Na ⁺	500 mL bottle
HI 7086M	standard solution at 23 g/L Na ⁺	230 mL bottle
HI 7087L	standard solution at 0.23 g/L Na ⁺	500 mL bottle
HI 7087M	standard solution at 0.23 g/L Na ⁺	230 mL bottle
HI 8080L	standard solution at 2.3 g/L Na ⁺	500 mL FDA bottle
HI 8080M	standard solution at 2.3 g/L Na ⁺	230 mL FDA bottle
HI 8086L	standard solution at 23 g/L Na ⁺	500 mL FDA bottle
HI 8086M	standard solution at 23 g/L Na ⁺	230 mL FDA bottle
HI 8087L	standard solution at 0.23 g/L Na ⁺	500 mL FDA bottle
HI 8087M	standard solution at 0.23 g/L Na ⁺	230 mL FDA bottle

Sodium Chloride (NaCl) Standard Solutions

Code	Description	Package
HI 7037L	calibration solution for % Readings (100% NaCl)	500 mL bottle
HI 7037M	calibration solution for % Readings (100% NaCl)	230 mL bottle
HI 7081L	standard solution at 30 g/L NaCl	500 mL bottle
HI 7081M	standard solution at 30 g/L NaCl	230 mL bottle
HI 7083L	standard solution at 3.0 g/L NaCl	500 mL bottle
HI 7083M	standard solution at 3.0 g/L NaCl	230 mL bottle
HI 7084L	standard solution at 58.4 g/L NaCl	500 mL bottle
HI 7084M	standard solution at 58.4 g/L NaCl	230 mL bottle
HI 7085L	standard solution at 0.3 g/L NaCl	500 mL bottle
HI 7085M	standard solution at 0.3 g/L NaCl	230 mL bottle
HI 7088L	standard solution at 5.84 g/L NaCl	500 mL bottle
HI 7088M	standard solution at 5.84 g/L NaCl	230 mL bottle
HI 7089L	standard solution at 125 g/L NaCl	500 mL bottle
HI 7089M	standard solution at 125 g/L NaCl	230 mL bottle
HI 7090L	ISA solution for sodium ISE	500 mL bottle
HI 7090M	ISA solution for sodium ISE	230 mL bottle
HI 8084L	standard solution at 58.4 g/L NaCl	500 mL FDA bottle
HI 8084M	standard solution at 58.4 g/L NaCl	230 mL FDA bottle
HI 8088L	standard solution at 5.84 g/L NaCl	500 mL FDA bottle
HI 8088M	standard solution at 5.84 g/L NaCl	230 mL FDA bottle
HI 8089L	standard solution at 125 g/L NaCl	500 mL FDA bottle
HI 8089M	standard solution at 125 g/L NaCl	230 mL FDA bottle
HI 8095L	standard solution at 146 g/L NaCl	500 mL FDA bottle
HI 8095M	standard solution at 146 g/L NaCl	230 mL FDA bottle

Fluoride Standard Solutions

Code	Description	Bottle
HI 7023/1L	TISAB Solution	1 L
HI 7023L	TISAB Solution	500 mL
HI 7023M	TISAB Solution	230 mL
HI 70701/1L	standard solution at 1 g/L F ⁻	1 L
HI 70701L	standard solution at 1 g/L F ⁻	500 mL
HI 70701M	standard solution at 1 g/L F ⁻	230 mL
HI 70702/1L	standard solution at 10 mg/L F ⁻	1 L
HI 70702L	standard solution at 10 mg/L F ⁻	500 mL
HI 70702M	standard solution at 10 mg/L F ⁻	230 mL
HI 70703/1L	standard solution at 100 mg/L F ⁻	1 L
HI 70703L	standard solution at 100 mg/L F ⁻	500 mL
HI 70703M	standard solution at 100 mg/L F ⁻	230 mL

Salinity and Fluoride Standard Solutions



Sodium (Na⁺) ISE Standard Solutions

The sodium and sodium chloride standard solutions are used for the calibration of pocket sized, portable, bench salinity meters and sodium ISE.

These solutions are available in 230 or 500 mL bottles, and also in light tight bottles that meet the FDA (Food & Drug Administration) specifications.

Fluoride standard solutions are used to calibrate all instruments that measure fluoride using a fluoride ISE.

The most common applications include drinking water, the analysis of water from springs close to volcanic rocks or products such as toothpaste.

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