

# EC Calibration Solutions

Quality Solutions for Laboratory Applications

- **Safety Data Sheets**
  - Safety data sheets for all Hanna solutions are available at [hannainst.com](http://hannainst.com) or upon request.
- **Expiration date**
  - The production batch number, expiration date, and temperature correlation table are reported on all Hanna calibration solutions.
- **NIST traceability**
  - Standardized using a conductivity meter and probe calibrated against NIST primary standard solutions or primary standard solutions prepared following NIST guidelines.
- **Air-tight bottles**
  - Air tight bottle with tamper-proof seal of freshness to ensure quality.
- **FDA compliant bottles (HI80xx)**
  - Hanna solutions are offered in opaque, light-tight bottles that meet FDA requirements.
- **High Accuracy Solutions (HI60xx)**
  - HI60xx high accuracy solutions are also available and are supplied with a certificate of analysis.



## 84 µS/cm Calibration Solution

This 84 µS/cm conductivity solution makes it possible to calibrate instruments with a conductivity scale of up to 200 µS/cm, in the measurement of pure or distilled water.

## 84 µS/cm Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI6033	84 µS/cm	500 mL	1 bottle		•
HI7033/1L	84 µS/cm	1 L	1 bottle		
HI7033L	84 µS/cm	500 mL	1 bottle		
HI7033M	84 µS/cm	230 mL	1 bottle		
HI5033-12	84 µS/cm	120 mL	1 bottle		
HI8033L	84 µS/cm	500 mL	1 bottle	•	•

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- **NIST traceability**
  - Standardized using a conductivity meter and probe calibrated against NIST primary standard solutions or primary standard solutions prepared following NIST guidelines.
- **Air-tight bottles**
  - Air tight bottle with tamper-proof seal of freshness to ensure quality.
- **Single use sachets**
  - Light block packaging prevents oxidation from UV light that could alter the value. Every sachet is as fresh as the day it was packaged.
- **FDA compliant bottles (HI80xx)**
  - Hanna solutions are offered in opaque, light-tight bottles that meet FDA requirements.
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## 1413 µS/cm Calibration Solution

The 1413 µS/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.



## 1413 µS/cm Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI6031	1413 µS/cm	500 mL	1 bottle		•
HI7031/1G	1413 µS/cm	1 G (3.78 L)	1 bottle		
HI7031/1L	1413 µS/cm	1 L	1 bottle		
HI7031L	1413 µS/cm	500 mL	1 bottle		
HI7031L/C	1413 µS/cm	500 mL	1 bottle		•
HI7031M	1413 µS/cm	230 mL	1 bottle		
HI5031-12	1413 µS/cm	120 mL	1 bottle		
HI7031-023	1.41 mS/cm	230 mL (GroLine®)	1 bottle		•
HI7031-012	1.41 mS/cm	120 mL (GroLine)	1 bottle		•
HI8031L	1413 µS/cm	500 mL	1 bottle	•	•

## 1413 µS/cm Sachets

Code	EC Value @25°C	Size	Package	Certificate of Analysis
HI70031C	1413 µS/cm	20 mL	25 sachets	•
HI70031G	1.41 mS/cm	20 mL (GroLine)	25 sachets	•
HI70031P	1413 µS/cm	20 mL	25 sachets	
HI77100C	1413 µS/cm & pH 7.01	20 mL	20 sachets (10 ea)	•
HI77100P	1413 µS/cm & pH 7.01	20 mL	20 sachets (10 ea)	

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- **NIST traceability**
  - Standardized using a conductivity meter and probe calibrated against NIST primary standard solutions or primary standard solutions prepared following NIST guidelines.
- **Air-tight bottles**
  - Air tight bottle with tamper-proof seal of freshness to ensure quality.
- **Single use sachets**
  - Light block packaging prevents oxidation from UV light that could alter the value. Every sachet is as fresh as the day it was packaged.
- **FDA compliant bottles (HI80xx)**
  - Hanna solutions are offered in opaque, light-tight bottles that meet FDA requirements.



## 5000 µS/cm Calibration Solution

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

### 5000 µS/cm Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7039/1L	5000 µS/cm	1 L	1 bottle		
HI7039L	5000 µS/cm	500 mL	1 bottle		
HI7039M	5000 µS/cm	230 mL	1 bottle		
HI7039-023	5000 µS/cm	230 mL (GroLine®)	1 bottle		•
HI7039-012	5000 µS/cm	120 mL (GroLine)	1 bottle		•
HI8039L	5000 µS/cm	500 mL	1 bottle	•	•

### 5000 µS/cm Sachets

Code	EC Value @25°C	Size	Package	Certificate of Analysis
HI70039C	5000 µS/cm	20 mL	25 sachets	•
HI70039G	5000 µS/cm	20 mL (GroLine)	25 sachets	•
HI70039P	5000 µS/cm	20 mL	25 sachets	



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- **Expiration date**
  - The production batch number, expiration date, and temperature correlation table are reported on all Hanna calibration solutions.
- **NIST traceability**
  - Standardized using a conductivity meter and probe calibrated against NIST primary standard solutions or primary standard solutions prepared following NIST guidelines.
- **Air-tight bottles**
  - Air tight bottle with tamper-proof seal of freshness to ensure quality.
- **Single use sachets**
  - Light block packaging prevents oxidation from UV light that could alter the value. Every sachet is as fresh as the day it was packaged.
- **FDA compliant bottles (HI80xx)**
  - Hanna solutions are offered in opaque, light-tight bottles that meet FDA requirements.



## 12880 µS/cm Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7030/1G	12880 µS/cm	1 G (3.78 L)	1 bottle		
HI7030/1L	12880 µS/cm	1 L	1 bottle		
HI7030L	12880 µS/cm	500 mL	1 bottle		
HI7030L/C	12880 µS/cm	500 mL	1 bottle		•
HI7030M	12880 µS/cm	230 mL	1 bottle		
HI5030-12	12880 µS/cm	120 mL	1 bottle		
HI8030L	12880 µS/cm	500 mL	1 bottle	•	•

## 12880 µS/cm Calibration Solution

The 12880 µS/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.



## 12880 µS/cm Sachets

Code	EC Value @25°C	Size	Package	Certificate of Analysis
HI70030C	12880 µS/cm	20 mL	25 sachets	•
HI70030P	12880 µS/cm	20 mL	25 sachets	
HI700304P	12880 µS/cm	20 mL (Pool Line)	25 sachets	

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- **Expiration date**
  - The production batch number, expiration date, and temperature correlation table are reported on all Hanna calibration solutions.
- **NIST traceability**
  - Standardized using a conductivity meter and probe calibrated against NIST primary standard solutions or primary standard solutions prepared following NIST guidelines.
- **Air-tight bottles**
  - Air tight bottle with tamper-proof seal of freshness to ensure quality.
- **FDA compliant bottles (HI80xx)**
  - Hanna solutions are offered in opaque, light-tight bottles that meet FDA requirements.



## 80000 µS/cm Calibration Solution

The 80,000 µS/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.

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

## 111800 µS/cm Calibration Solution

This calibration solution is useful to calibrate instrumentation used to measure samples with conductivity higher than 100 mS/cm (100,000 µS/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 µS/cm Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7034/1L	80000 µS/cm	1 L	1 bottle		
HI7034L	80000 µS/cm	500 mL	1 bottle		
HI7034M	80000 µS/cm	230 mL	1 bottle		
HI5034-12	80000 µS/cm	120 mL	1 bottle		
HI8034L	80000 µS/cm	500 mL	1 bottle	•	•

### 111800 µS/cm Bottles

Code	EC Value @25°C	Size	Package	FDA Bottle	Certificate of Analysis
HI7035/1L	111800 µS/cm	1 L	1 bottle		
HI7035L	111800 µS/cm	500 mL	1 bottle		
HI7035M	111800 µS/cm	230 mL	1 bottle		
HI8035L	111800 µS/cm	500 mL	1 bottle	•	•



## TDS Calibration Solutions

Quality Solutions for Laboratory Applications

- **Safety data sheets**
  - Safety data sheets for all Hanna solutions are available at [hannainst.com](http://hannainst.com) or upon request.
- **Expiration date**
  - The production batch number, expiration date, and temperature correlation table are reported on all Hanna calibration solutions.
- **NIST traceability**
  - Standardized using a conductivity meter and probe calibrated against NIST primary standard solutions or primary standard solutions prepared following NIST guidelines.
- **Air-tight bottles**
  - Air tight bottle with tamper-proof seal of freshness to ensure quality.
- **Single use sachets**
  - Light block packaging prevents oxidation from UV light that could alter the value. Every sachet is as fresh as the day it was packaged.

### TDS Solutions

Hanna TDS calibration solutions are prepared against a NIST traceable potassium chloride solution.

Hanna TDS solutions have the lot number and expiration date clearly marked on the label and are air tight with a tamper-proof seal to ensure the quality of the solution. Hanna's line of TDS calibration solutions have been specially formulated to have an expiration of 5 years from the date of manufacture for an unopened bottle.



### TDS Bottles

Code	TDS Value @25°C	Size	Package	Certificate of Analysis
HI6032	1382 mg/L (ppm)	500 mL	1 bottle	•
HI7032/1L	1382 mg/L (ppm)	1 L	1 bottle	
HI7032L	1382 mg/L (ppm)	500 mL	1 bottle	
HI7032M	1382 mg/L (ppm)	230 mL	1 bottle	
HI7036/1L	12.41 g/L (ppt)	1 L	1 bottle	
HI7036L	12.41 g/L (ppt)	500 mL	1 bottle	
HI70442/1L*	1500 mg/L (ppm)	500 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	
HI70442P*	1500 mg/L (ppm)	20 mL	25 sachets	
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).

## Quick Cal

### pH/EC Quick Cal Calibration Solution

Quick Cal is for use with Hanna's GroLine® pH and/or EC/TDS meters. Using the Quick Cal function found in compatible meters allows for single-point calibration for pH and/or conductivity sensors.

- Calibration solution for Gro line pH and EC/TDS meters
- pH calibration buffer value of pH 6.86
- EC calibration standard value of 5,000  $\mu\text{S}/\text{cm}$  (5.00 mS/cm)
- Safety Data Sheets
  - Safety data sheets for all Hanna solutions are available at [hannainst.com](http://hannainst.com) or upon request.
- Expiration date
  - The production batch number, expiration date, and temperature correlation table are reported on all Hanna calibration solutions.
- NIST traceability
  - Standardized using a pH meter calibrated by means of two standard solutions prepared from NIST standard reference materials. A conductivity meter and probe calibrated against NIST primary standard solutions or primary standard solutions prepared following NIST guidelines.
- Air-tight bottles
  - Air tight bottle with tamper-proof seal of freshness to ensure quality.
- Single use sachets
  - Light block packaging prevents oxidation from UV light that could alter the value. Every sachet is as fresh as the day it was packaged.



GroLine®

#### Quick Cal pH/EC Bottles

Code	Size	Certificate of Analysis
HI5036-050	500 mL (GroLine)	•
HI5036-023	230 mL (GroLine)	•
HI5036-012	120 mL (GroLine)	•

#### Quick Cal pH/EC Sachets

Code	Size	Certificate of Analysis
HI50036P	20 mL sachets, 25 pcs. (GroLine)	-

## Seawater Salinity Calibration Solutions

HI7037 is a premium quality calibration solution for seawater salinity according to the 1902 International Council for the Exploration of the Sea (ICES) percent scale. Hanna calibration solutions have the lot number and expiration date clearly marked on the label. All bottles are air tight with a tamper-proof seal to ensure the quality of the solution. Hanna's line of calibration solutions have been specially formulated to have an expiration of 5 years from the date of manufacture for an unopened bottle.

- NaCl calibration solution for % readings of salinity.
- Air tight bottle with tamper-proof seal to ensure quality.
- Lot number and expiration date printed on each label.



#### Salinity Bottles

Code	Description	Size	Package
HI7037L	100% NaCl	500 mL	1 bottle
HI7037M	100% NaCl	230 mL	1 bottle

#### Salinity Sachets

Code	Description	Size	Package
HI70024P	35.00 ppt	20 mL	25 pcs