

INSTRUCTIONS

CD-30 Chek-Mite™

The CD-30 is a portable conductivity meter with a water and chemical resistant case. The CD-30 has two parameter measurement modes, providing readings in $\mu\text{S}/\text{cm}$ and mS/cm . The CD-30 features Automatic Calibration, Automatic Read, and Automatic Temperature Compensation. The batteries and epoxy body sensor are replaceable.

Specifications:

Parameter/Mode 1

Range	0 to 1999 $\mu\text{S}/\text{cm}$
Resolution	1 $\mu\text{S}/\text{cm}$
Accuracy	$\pm 2\%$ of range max
Calibration	84 μS or
Standards	1413 μS

Parameter/Mode 2

Range	0 to 19.99 mS/cm
Resolution	0.01 mS/cm
Accuracy	$\pm 5\%$ of range max
Calibration Std	12.88 mS

General

Temperature	0°C to 50°C
Compensation	Automatic
Reference Temp	25°C
Environment	0 to 50°C
Power Supply	2 x 3 volt Lithium Cells (CR-2032)
Battery Life	200 hours (approximately)
Dimensions	9.3L x 1.8W x 1.3D (inches) 236.2L x 45.7W x 33.0D (mm)
Weight:	5 oz (140g) approx.

Compliant with CE directives EN-55011 and EN-50082-1. Water resistant to IP66+.

Unpacking & Conditioning:

Installing Batteries:

1. Remove the two small screws retaining the access panel on the rear of unit.
2. Ensuring that the positive (+) pole of each battery is facing up, slide the two batteries into the battery compartment.
3. Replace the access panel and screws. Assure that the sealing gasket on the access panel remains properly positioned so that waterproofing will be maintained.

Removing/Attaching Sensor:

1. Unscrew and remove the retaining nut at the top of the sensor.
2. Pull the sensor straight out from the meter connector.
3. Be careful to keep the "O" rings in proper position when attaching the sensor to the meter. Do not over tighten the retaining nut.

Sensor Conditioning:

1. Clean the tip of the sensor in a solution of half distilled water and half alcohol.
2. Rinse the tip of the sensor with distilled water.
3. Blot or shake off excess water and allow sensor to completely dry.

Automatic OFF:

To extend battery life, the meter will automatically turn OFF approximately 8 minutes after the last key press.

Automatic Temperature Compensation (ATC):

The ATC function will compensate for temperature variations during all calibration and measurement procedures. However, for optimum accuracy, it is recommended that calibration standards and sample solutions be at the same temperature, preferably 25°C. The meter LCD provides display of the sample/standard temperature.

The meter uses a 25°C Reference Temperature Compensation for all measurements. When the sample temperature is other than 25°C, the meter compensates the actual conductivity value measured and displays the value that the sample would have if the sample temperature was 25°C.

Auto-Read or Manual:

The meter offers two ways to take a reading and endpoint the result – AUTO-READ or MANUAL. The choice to read in Auto or Manual applies to both calibration and sample measurement.

In Manual mode the meter will continue to measure until the [READ] key is pressed again or until the battery power saver turns the unit off.

In Auto-Read mode, endpoint detection software within the meter will automatically endpoint the reading when the response from the sensor is stable. When in Auto-Read mode, a measurement can be manually endpointed at any time by pressing the [READ] key.

To select between AUTO-READ and MANUAL:

- Press and HOLD the [READ] key for longer than 3 seconds at any time during the READ cycle to alternate between MANUAL or AUTO-READ modes. A <circle A> icon will be displayed when in AUTO-READ mode.

Calibration:

Daily calibration is recommended.

The first calibration point of zero conductivity is factory set within the meter electronics. To complete the calibration routine the meter must also be calibrated to 84 μS standard or 1413 μS standard for $\mu\text{S}/\text{cm}$ measurements (mode 1) or to 12.88 mS standard for mS/cm measurements (mode 2).

1. Remove the meter End Cap. Assure that the sensor is clean and dry.
2. Press the [ON/OFF] key to turn the meter ON.
3. Look at the LCD to see which unit of measure is displayed. The unit of measure on display indicates which parameter/mode is active. Press the [MODE] key to set the unit to the desired parameter:

Parameter 1 / Mode 1 - < μS > displayed
Calibrate to 84 μS or 1413 μS standard

Parameter 2 / Mode 2 - < mS > displayed
Calibrate to 12.88 mS standard

4. Once the desired unit of measure is displayed, immerse the tip of the sensor into the standard to a depth of approximately 1 inch (25mm).
5. Press the [CAL] key. A "beep" will be heard and the <CAL> icon will flash to indicate that calibration is in progress.
6. If in MANUAL, press the [READ] key to endpoint the reading when the displayed value appears to be stable. If in AUTO-READ (<circle A> icon is displayed), the reading will endpoint automatically.
7. At endpoint, the display will "freeze" to the standard value, a "beep" will be heard, and the <CAL> icon will stop flashing and remain displayed to indicate that calibration is complete.
8. Rinse the sensor tip with distilled or deionized water. Blot the tip to remove excess water.

NOTE: The <CAL> icon used to indicate that the meter is calibrated will remain on the display until the meter is turned OFF. Calibration data is not lost when the unit is turned OFF but the icon does not reappear. This serves as a general reminder to calibrate frequently.

Sample Measurement Procedure:

1. Remove the meter End Cap.
2. Press the [ON/OFF] key to turn the meter ON.
3. Look at the LCD to see which unit of measure is displayed. The unit of measure on display indicates which parameter/mode is active. Press the [MODE] key to set the unit to the desired parameter:

Parameter 1 / Mode 1 - <μS> displayed

Parameter 2 / Mode 2 - <mS> displayed

4. Once the desired unit of measure is displayed, immerse the tip of the sensor into the sample to a depth of approximately 1 inch (25mm). Assure that the sample is in complete contact with the sensing elements (ie. no trapped air bubbles).
5. Press the [READ] key. A "beep" will be heard and the display will change according to the measured value of the sample.
6. If in MANUAL, press the [READ] key to endpoint the reading when the displayed value appears to be stable. If in AUTO-READ (<circle A> icon is displayed), the reading will endpoint automatically.
7. Rinse the sensor tip with distilled or deionized water. Blot the tip to remove excess water.
8. Repeat steps 4, 5, 6, and 7 for further samples.

Conversion Chart:

TDS	Conductivity	Resistivity
1 ppm	2 μS	500,000 Ω
10 ppm	20 μS	50,000 Ω
42 ppm	84 μS	11,900 Ω
250 ppm	500 μS	2000 Ω
500 ppm	1000 μS	1000 Ω
707 ppm	1413 μS	708 Ω
1000 ppm	2000 μS	500 Ω
1000 ppm	2.00 mS	500 Ω
1382 ppm	2.76 mS	362 Ω
2000 ppm	4.00 mS	250 Ω
2.0 ppt	4.00 mS	250 Ω
6.4 ppt	12.88 mS	78 Ω
10.0 ppt	20.00 mS	50 Ω
12.41 ppt	24.80 mS	40 Ω
20.0 ppt	40.00 mS	25 Ω

Error Codes:

<E1> or <E2> displayed

Value of calibration standard not correct or sensor not functioning properly.

Confirm correct calibration standard is in use.

Use fresh calibration standard if appropriate.

Clean the sensor.

<E3> displayed

Temperature of calibration standard or sample is beyond instrument range.

<Er> displayed

Measurement of calibration standard or sample is beyond instrument range.

Low Battery icon displayed or No display when [ON] is pressed

Batteries are below power level required to operate instrument. Replace batteries.

Sensor Care and Maintenance:

The sensor must be cleaned, rinsed, and dried before taking a measurement and before storage. A solution of half water and half alcohol can be used for cleaning. Distilled or deionized water should be used for rinsing.

Replacements/Accessories:

473041 Replacement Conductivity Sensor

470530 Replacement Batteries (2/pack)

473740 84μS Calibration Sachet
(10/case)

473732 84μS Calibration Standard
(460mL)

473738 1413μS Calibration Sachet
(10/case)

473623 1413μS Calibration Standard
(500mL)

473737 12.88mS Calibration Sachet
(10/case)

473624 12.88mS Calibration Standard
(500mL)

Warranty:

NOVA-pH warrants this product to be free from defects in materials and workmanship for a period of 90 days from the date of purchase.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NOVA-pH SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGES ARISING FROM THE USE OF THESE PRODUCTS NOR FOR CONSEQUENTIAL DAMAGES OF ANY KIND.

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