

Combined pH and Conductivity Calibration

14.0 mS and 7.00 pH using Combined Standard Solution

CAUTION: USE ONLY MESA LABORATORIES COMBINED CALIBRATOR SOLUTION FOR THIS STEP. USE OF OTHER SOLUTIONS MAY RESULT IN INCORRECT CALIBRATION

Materials Needed:

- ✓ Care and Calibration Station, or a clean 100 ml container (sample cup) and sample tube
- ✓ Combined Calibrator Solution (14.0 mS & 7.00 pH) (Mesa P/N 02.0062 or 02.0070)

Step	Starting Screen	Action	Screen Displayed
1E	Measure  14.0 mS 22.9 °C 4.0 pH Menu  Hold	From the 'Home' screen, press  .	Select Menu → Calibrate Units Other Meas.   Select
2E	Select Menu → Calibrate Units Other Meas.   Select	Move cursor to the 'Calibration selection and press  .	Calibrate Menu → Both (14-7) Conductivity pH Meas.   Select
3E	Calibrate Menu → Both (14-7) Conductivity pH Meas.   Select	Move cursor to the 'Both (14-7)' selection and press  .	Calibrate ^{14/7.0} 14.2 mS 6.8 pH Abort  Cal
4E	Calibrate ^{14/7.0} 14.2 mS 6.8 pH Abort  Cal	Hold the meter with the syringe over the screen. Draw the Combination Solution slowly into the meter. In order to make an accurate measurement, the solution must be flowing through the meter at the time the calibration is taken.	Calibrate ^{14/7.0} 14.0 mS 7.0 pH Abort  Cal
5E	Calibrate ^{14/7.0} 14.0 mS 7.0 pH Abort  Cal	When the reading is stable, while still drawing solution slowly into the meter, press  to apply the new calibration settings.	Saving...

Note: To ease the calibration process using the Combined Calibrator Solution (Mesa P/N 02.0062 or 02.0070), the meter has a 'Hot Button' that will bring the user to the 14.00 mS and 7.0 pH calibration screen automatically. From the Home screen, simply press , and the 14.00 mS and 7.0 pH calibration screen shown above will appear. Continue with the calibration from this point as instructed.

High Conductivity Calibrations

14.0 mS, 100 mS and 50 mS using Conductivity Calibration Solution

Materials Needed:

- ✓ Care and Calibration Station, or a clean 100 ml container (sample cup) and sample tube
- ✓ 14.0 mS Conductivity Standard Solution (Mesa P/N 02.0014* or 02.0027*)

Step	Starting Screen	Action	Screen Displayed
1F	Measure  14.0 mS 22.9 °C 4.0 pH Menu ▾ Hold	From the 'Home' screen, press  .	Select Menu → Calibrate Units Other Meas. ↑ Select
2F	Select Menu → Calibrate Units Other Meas. ↑ Select	Move cursor to the 'Calibrate' selection and press  .	Calibrate Menu → Both (14-7) Conductivity pH Meas. ↑ Select
3F	Calibrate Menu Both (14-7) → Conductivity pH Meas. ↑ Select	Move cursor to the 'Conductivity' selection and press  .	Calibrate Menu → High Low Meas. ↑ Select
4F	Calibrate Menu → High Low Meas. ↑ Select	Move cursor to the 'High' selection and press  .	Calibrate Menu → 14.0 mS 100 mS 50 mS (opt.) Meas. ↑ Select
5F	Calibrate Menu → 14.0 mS 100 mS 50 mS (opt.) Meas. ↑ Select	Move cursor to the '14.0 mS' selection and press  . Hold the meter with the syringe over the screen. Draw the 14.0 mS Conductivity Standard Solution slowly into the meter. In order to make a conductivity measurement, the solution must be flowing through the meter at the time the calibration is taken.	Calibrate 14 mS 14.2 mS Abort ▮ Cal
6F	Calibrate 14 mS 14.2 mS Abort ▮ Cal	When the reading is stable, while still drawing solution slowly into the meter, press  to apply the new calibration settings. A post calibration screen will display the calibration value followed by the saving display.	Calibrate 14 mS 14.0 mS Abort ▮ Cal Saving...

To calibrate the 100 mS Conductivity Range, use Steps 1F – 6F, choosing 100 mS in Step 5F, and use 100 mS Conductivity Standard Solution (Mesa P/N 02.0036*).

To calibrate the 50 mS Conductivity Range, use Steps 1F – 6F, choosing 50 mS in Step 5F, and use 50 mS Conductivity Standard Solution (Mesa P/N 02.0071 or equivalent).

Low Conductivity Calibrations

150 μS and 1.0 mS using Conductivity Standard Solution

Use this method when calibrating for TDS measurements

Materials Needed:

- ✓ Care and Calibration Station, or a clean 100 ml container (sample cup) and sample tube
- ✓ 150.0 μS (P/N 02.0045*) or 1.0 mS (P/N 02.0037*) Conductivity Standard Solution

Step	Starting Screen	Action	Screen Displayed
1G	Measure  14.0 mS 22.9 °C 4.0 pH Menu  Hold	From the 'Home' screen, press the  button.	Select Menu → Calibrate Units Other Meas.  Select
2G	Select Menu → Calibrate Units Other Meas.  Select	Move cursor to the 'Calibration' selection and press  .	Calibrate Menu Both (14-7) → Conductivity pH Meas.  Select
3G	Calibrate Menu Both (14-7) → Conductivity pH Meas.  Select	Move cursor to the 'Conductivity' selection and press  .	Calibrate Menu → High Low Meas.  Select
4G	Calibrate Menu → High Low Meas.  Select	Move cursor to the 'Low' selection and press  .	Calibrate Menu → 150 μS 1000 μS Meas.  Select
5G	Calibrate Menu 150 μS → 1000 μS Meas.  Select	Move cursor to the '1000 μS ' selection and press  . Hold the meter with the syringe over the screen. Draw the 1000 μS Conductivity Standard Solution slowly into the meter. In order to make a conductivity measurement, the solution must be flowing through the meter at the time the calibration is taken.	Calibrate 1 mS 1006 μS Abort  Cal
6G	Calibrate 1 mS 1000 μS Abort  Cal	When the reading is stable, while still drawing solution slowly into the meter, press  to apply the new calibration settings.	Saving...

To calibrate the 150 μS Conductivity Range, use Steps 1G – 6G, choosing 150 μS in Step 5G, and use 150.0 μS Calibration Solution (Mesa P/N 02.0045 or equivalent).

pH Calibration

4.0, 7.0, and 10.0 pH using pH calibration solutions

Materials Needed:

- ✓ Care and Calibration Station, or a clean 100 ml container (sample cup) and sample tube
- ✓ pH 7.00 Buffer Solution (Mesa P/N 02.0030 or 02.0031*)

Step	Starting Screen	Action	Screen Displayed
1H	Measure  14.0 mS 22.9 °C 4.0 pH Menu  Hold	From the 'Home' screen, press the  button.	Select Menu → Calibrate Units Other <hr/> Meas.  Select
2H	Select Menu → Calibrate Units Other <hr/> Meas.  Select	Move cursor to 'Calibrate' selection and press  .	Calibrate Menu Both (14-7) Conductivity → pH <hr/> Meas.  Select
3H	Calibrate Menu Both (14-7) Conductivity → pH <hr/> Meas.  Select	Move cursor to the 'pH' selection and press  .	Calibrate pH → pH 7.0 pH 4.0 pH 10.0 <hr/> Meas.  Select
4H	Calibrate pH → pH 7.0 pH 4.0 pH 10.0 <hr/> Meas.  Select	Move cursor to the 'pH 7.0' selection and press  . Hold the meter with the syringe over the screen. Draw the 7.0 pH buffer solution slowly into the meter.	Calibrate pH 7 6.8 pH <hr/> Abort  Cal
5H	Calibrate pH 7 7.0 pH <hr/> Abort  Cal	When the reading is stable, while still drawing solution slowly into the meter, press  to apply the new calibration settings.	Saving...

To calibrate the 4.0 pH and the 10.0 pH Ranges, use Steps 1H – 5H, choosing either 4.0 pH or 10.0 pH in Step 4H, and use the 4.0 pH Buffer Solution (Mesa P/N 02.0032*) or 10.0 pH Buffer Solution (Mesa P/N 02.0034 or equivalent) (respectively).