



Hach DR300 Chlorine & 2100Q Turbidity Analyzers

Operation, Calibration & Routine Maintenance

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Hach DR300 Chlorine Analyzer

Reliable

Hach has manufactured high end instrumentation since 1993

Durable

Rugged, waterproof IP67 design

Simple

Intuitive operation with large display



APS

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Be Right™

Test Method & Best Practices

- 1) Select Range (LR or HR)
- 2) Prepare Blank
- 3) Zero the Instrument
- 4) Prepare Sample
- 5) Measure & Record Sample



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Hands-On Demo (Chlorine)



Pocket Colorimeter II



Free & Total Chlorine



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Hach 2100Q Turbidity Analyzer

- **Easy on-screen assisted calibration and verification**
- **Simple data transfer**
- **Accurate for rapidly settling samples**
- **Convenient data logging**
- **Optical system for precision in the field**

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Hach 2100Q Turbidity Analyzer

- **Tungsten Filament Lamp *or* LED**
 - Only tungsten lamp meets EPA 180.1
- **0-1000 NTU Range**
- **Silicon Photodiode Detector**
- **500 Record Datalogger**
- **15mL Sample**



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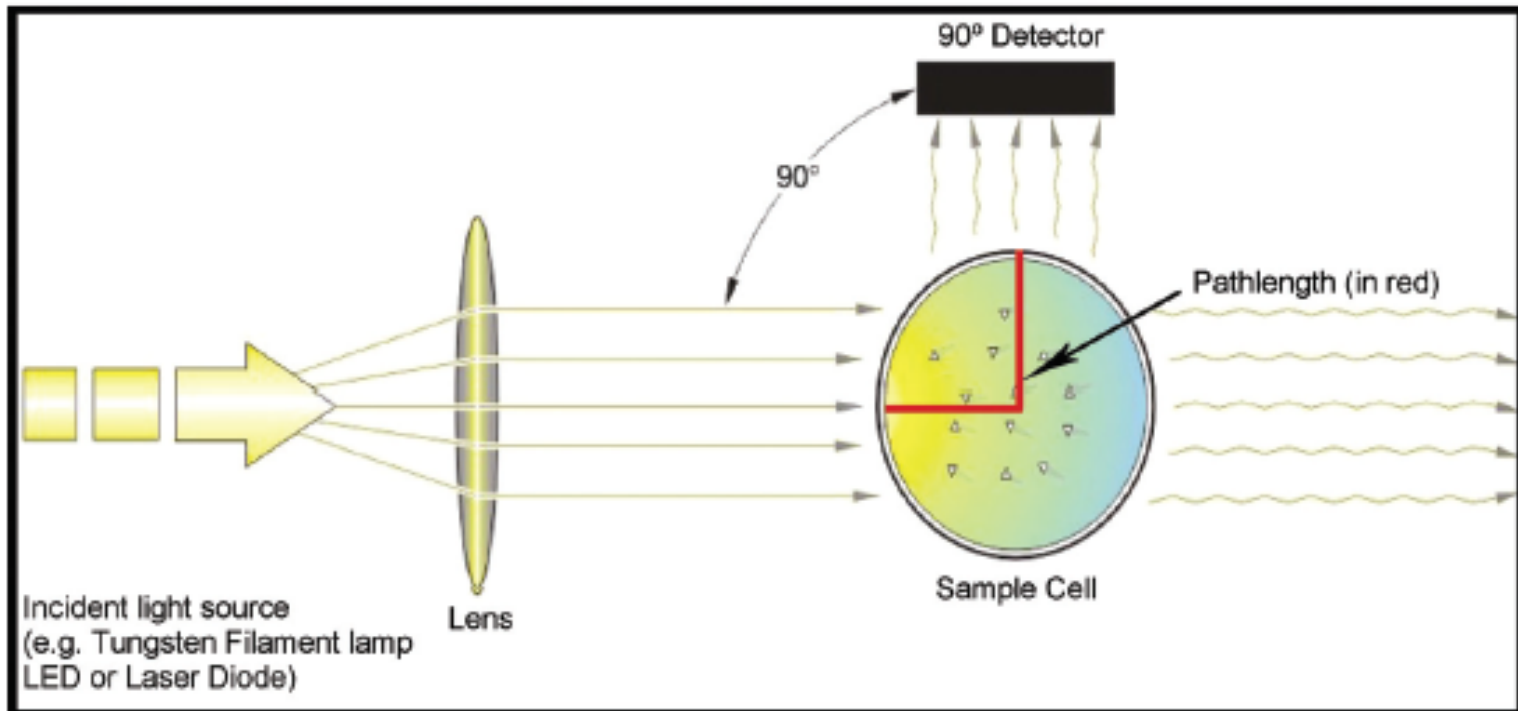
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What is Turbidity?

Figure 1: Common Turbidimeter Design. The design contains the three critical components: incident light source, detector and sample cell. The most common turbidimeters use a 90-degree detection angle and are also referred to as nephelometers.



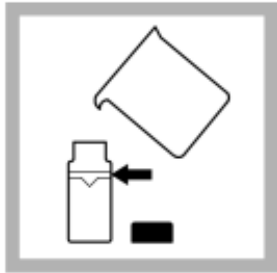
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Test Method & Best Practices



1. Collect a representative sample in a clean container. Fill a sample cell to the line (about 15 mL). Take care to handle the sample cell by the top. Cap the cell.



2. Wipe the cell with a soft, lint-free cloth to remove water spots and fingerprints.

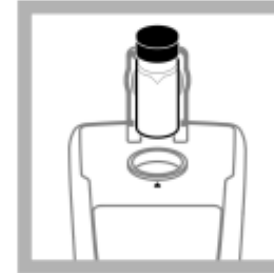


3. Apply a thin film of silicone oil. Wipe with a soft cloth to obtain an even film over the entire surface ([Apply silicone oil to a sample cell](#) on page 20).

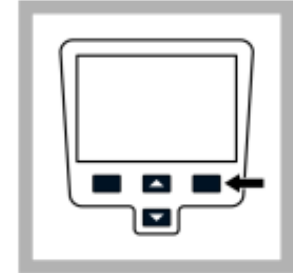


4. Push the **Power** key to turn the meter on. Place the instrument on a flat, sturdy surface.

Note: Do not hold the instrument while making measurements.



5. Gently invert and then insert the sample cell in the instrument cell compartment so the diamond or orientation mark aligns with the raised orientation mark in front of the cell compartment. Close the lid.



6. Push **Read**. The display shows Stabilizing then the turbidity in NTU (FNU). The result is shown and stored automatically. Additional information is available on the manufacturer's website.

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Hands-On Demo (Turbidity)



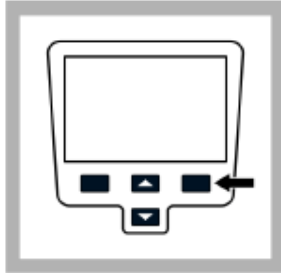
2100Q StabCal Calibration Procedure



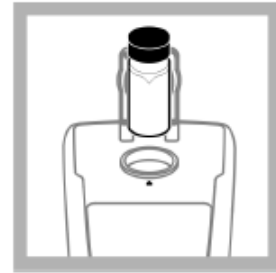
1. Push the **CALIBRATION** key to enter the Calibration mode. Follow the instructions on the display.
Note: Gently invert each standard before inserting the standard.



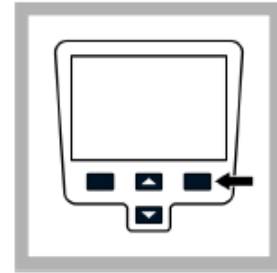
2. Insert the 20 NTU StabCal Standard and close the lid.
Note: The standard to be inserted is bordered.



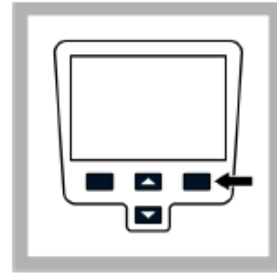
3. Push **Read**. The display shows Stabilizing and then shows the result.



4. Repeat Step 2 and 3 with the 100 NTU and 800 NTU StabCal Standard.
Note: Push Done to complete a 2 point calibration.



5. Push **Done** to review the calibration details.



6. Push **Store** to save the results. After a calibration is complete, the meter automatically goes into the Verify Cal mode. Additional information is available on the manufacturer's website.

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Questions?

