pH Measurement Checklist

Check these for elements for proper pH measurements: meter, electrode, buffer, and sample.

**pH Meter**
- Confirm the meter settings are correct.
- **TIP:** Always remember to reference your manual.
- Confirm that your temperature sensor is connected (if required).
- Check that the batteries & power cord are in good working order.
- Check that the electrode connection is secure.
- Calibrate frequently to at least 2 points with fresh buffers.
  - Replace if the meter does not turn on or shows signs of severe wear.

**Electrode**
- Inspect your electrode cord and connection for damage.
- Check that the meter connection is secure.
- Inspect the pH bulb for scratches.
- Confirm the pH bulb isn’t broken.
- Use cleaning solution to ensure electrode bulb & junction are clean.
- Use storage solution to ensure the electrode is hydrated.
  - **TIP:** Place in storage solution at least 1 hour or overnight to fully hydrate.
- Use the correct electrode type for sample being tested.
  - Replace if electrode won’t stabilize, calibrate or is broken or scratched.

**pH Buffers**
- Stir buffer with magnetic stirrer or probe.
- Confirm you are using the correct pH calibration buffer.
  - **TIP:** You should “bracket” your expected result e.g.
    If the expected result = pH 5
    Use buffers pH 4.01 and pH 7.01.
- Inspect your buffers for visible contamination.
- Use fresh buffer for calibration.
- Confirm buffer is not expired or bottle has not been opened for more than 4-8 weeks; or 1-2 weeks for buffer > pH 7.
  - Replace buffers if contamination is present, they are expired or have been opened for too long.

**Sample**
- Stir sample with magnetic stirrer or probe.
- Confirm you have enough sample to cover the electrode bulb and junction.
- Confirm the temperature of your sample will not damage electrode.
- Sample is appropriate for probe type.
- Sample is fresh and representative of the process/product.

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**Clean Regularly | Calibrate Often | Condition Always**

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