

## Non-glass pH Probe Tips and Procedures

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### Tips for new probes or probes in extended dry storage

- Stir the probe in pH 7 buffer solution to dislodge air bubbles. Before use, soak new probes or probes that are stored for an extended time in pH 7 buffer for at least 5 minutes.
- Remove reference gel from the probe sensor and the inner surface of the rubber dust cap.
- Calibrate the probe. First with pH 7 buffer, then with a second buffer (usually pH 4 or pH 10) and then a third buffer, if necessary.
- Check the calibration. Put the probe into the pH 7 buffer. If the reading is incorrect, the probe is not hydrated. Soak the probe for 5 minutes in pH 7 buffer and repeat the re-calibrate.
- Store the probe dry with the sensor cap on.
- For semi-solids use, gently twist the probe to make sufficient contact with the sample to the sensor.

### Clean the pH probe

#### Before the probe is cleaned:

- For use in dairy, cheese or meat applications, soak the probe in Pepsin Cleaning Solution for 15 minutes.
  - Do not use sharp metal objects (needle, pin, etc.) to clean the sensor surface. Scratching the surface of the sensor may cause permanent damage to the probe.
1. Use a soft-bristle toothbrush to clean the sensor with soap and water. Make sure all debris is removed from the sensor surface.
  2. Rinse the probe fully and re-calibrate.

### Maximize probe life

- Rinse the probe fully after any calibration, measurement and cleaning.
- Add sensor cap to the end of the probe when not in operation.
- Cool samples to room temperature.
- When semi-solids are tested, make sure solid objects (i.e., bone or gristle) do not scratch the sensor.
- Use new buffers and rinse solution.
- Do not use the probe in environments that will damage the epoxy materials used in the probe tip. Keep the probe away from acetone, toluene, methylene chloride, xylene and other strong organic solvents.
- Avoid environments with static electricity. Electrostatic discharge (ESD) can permanently damage the probe.
- Avoid use at temperatures more than 60 °C. Thermal cycling can decrease the life of the probe.
- Do not let oil, fat, food particles, starch, protein or other materials stay on the probe after use.
- Prevent damage to the silicon chip sensor. Do not use the probe in hydrofluoric acid or abrasive samples or other environments that can cause damage to the silicon chip sensor.

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