



## Texas Tech University

### pH Calibration

1. Press **Power**.
2. If **bat** appears in the right corner of the screen, replace the 9 volt battery.
3. To turn off Auto-off, press **2nd** and **setup**. Press **yes** until 1-4 appears. Press **setup** and OFF should appear. Press **yes** 4 more times and then press **measure**. The pH reading will reappear. Place probe in pH 7 buffer and press **cal**. P1 will appear at the bottom of the screen.
4. When screen flashes 7.01 ready, press **yes**. P2 will then appear.
5. Remove probe and rinse with distilled water and dry with a kimwipe.
6. Place probe in pH 4 buffer.
7. When screen flashes 4.01 ready, press **yes**.
8. Remove probe and rinse with distilled water and dry with a kimwipe.
9. If slope is not between 90.0 and 110, recalibrate from step 3.
10. If temperature is not obtained, adjust temperature to 4°C by pressing until the temperature reaches 4°C.
11. When sampling is complete, press **Power** to turn off, rinse probe with distilled water and wipe clean with a kimwipe.
12. Replace probe in storage solution.
13. If **bat** appears while sampling, replace and recalibrate from #3.

### pH and Temperature Sampling Procedure

1. At desired times post mortem, calibrate meter as stated above.
2. With a knife, cut a slot for the pH probe between the vertebrae of the loin.
3. Place pH probe in the slot and the thermometer between the vertebrae below the pH probe.
4. Allow 5-10 seconds to calibrate. Record pH and temperature.

5. When sampling is complete, be sure to turn off thermometers and pH meter, rinse probe with distilled water and wipe clean with a kimwipe and replace the probe in the storage solution.
6. Remove batteries and tape thermometer batteries to top of thermometer and place pH meter battery in pH meter kit case.

\*\*\*Reminder - If you accidentally break a probe off in the carcass, remove **ALL** glass with a knife immediately!!!

#### **pH Maintenance and Storage**

1. For short term storage (less than 24h) the probe can soak in a pH 4 or buffer.
2. For long term storage the probe needs to be stored in the following solution: **10g of KCL for every 100mL pH 4 buffer solution.**
3. Do not store the probe in distilled or deionized water or leave it out in the air.
4. The pH probe can be cleaned by soaking in a light detergent solution.
5. To remove contamination soak for 30 seconds in a 0.1 HCL and then rinse well with detergent.

#### **Measurement of pH in Post-Rigor Muscle**

1. Standardize pH meter with buffers 4 and 7 rinsing and wiping with distilled water and kimwipes between each measurements.
2. Take 6 core samples.
3. Blend cores and weigh 10g of sample.
4. Add 10g of sample and 90mL of distilled water into a blender jar.
5. Blend for 1 minute or as long as necessary to disperse the meat as much as possible.
6. Place a filter cone into the solution.
7. Place pH electrode in the center of the filter so meat particulate is avoided.
8. Clean and rinse electrode.