



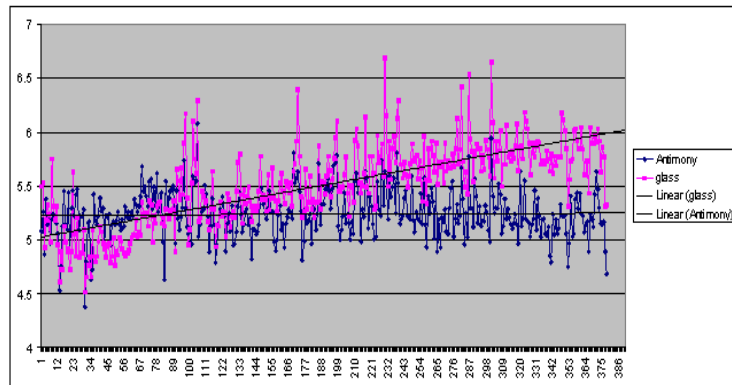
November 6, 2008

To: Veris MSP Customers

From: Veris Technologies Customer Service

Re: Antimony pH electrodes

Several Veris MSP customers have reported excessive wear on glass pH electrodes, leading to premature failure and drifting readings. These problems have been especially troublesome in abrasive, sandy soil. In mid-2007, we began field trials using an electrode tip constructed with antimony metalloid. In these trials, we used one glass and one antimony electrode, in order to compare performance. Shown below is a line graph from one of several test fields where the glass electrode exhibited drift and the antimony electrode measured field pH variability consistently. In addition to our internal testing, we have had several beta testers using them as well. The results have been very good and we believe this electrode represents a major step in reduced per-acre cost and improved data quality.



As you transition from glass to antimony electrodes, here are some things to be aware of:

- Cost of antimony electrode (part #35200) is \$142.38 (vs. \$85.25 for glass). Longer life should more than make up the difference.
- The antimony electrode has the exact same dimensions and connections as the glass electrode
- Antimony is similar to lead in terms of safety. Don't grind it and breathe the dust, or touch the electrode tip. Full safety details are available at: <http://www.cdc.gov/niosh/npg/npgd0036.html>
- New firmware is available on-line with new equations for the antimony values; be sure to download the correct version for floppy-disk drive or CF card drive.
- You can continue to use your current firmware, for example if you wanted to run one glass and one antimony electrode. After calibration the pH values shown on the instrument screen and in the VPHE file will be calibrated and expressed in the proper pH range; Because the span on new antimony electrodes is not as high as glass (approximately 2.75 vs. 3), the calibration score will be lower than glass.