ASI TODAY

A newsletter for customers of Analytical Sensors & Instruments Ltd. *Spring/Summer 2010*

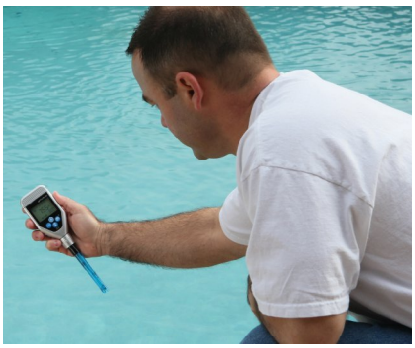
ASI announces a new line of handheld Testers beginning with the pH/ORP TesTrode

The ASI Engineering team has had a busy 2010 with the launch of the new pH/ORP TesTrode at Pittcon 2010 in March. Later this year we will launch other parameters in this exciting new handheld, all-in-one tester platform. You won't find a better feature set for the price than ASI's pH/ORP TesTrode. This pH and ORP Tester is perfect for general purpose, environmental, pool & spa, aquaculture, or other pH and temperature measurements.

With it's ±0.02 pH unit accuracy and the ability to calibrate it on the pH mode with 1, 2 or 3 pH buffers that are automatically recognized, you get a very capable tester at a fraction of the cost of a portable or bench-top pH/ORP Meter. A one point calibration adjusts the electrode offset, whereas the two and three point calibrations provide a full slope and offset calibration for the utmost in accuracy. The pH/ORP TesTrode will auto recognize both the NIST pH buffer sets (4.01, 7.00, and 10.01) as well as the IUPAC Buffers (4.01, 6.86, and 9.18) - just set your preference before you calibrate.

The pH/ORP TesTrode utilizes a standard 12-mm diameter combination pH electrode with temperature sensor, or an available pH and ORP electrode with temperature sensor. Instead of replacing the entire tester when the electrode becomes less accurate or fails, you can just replace the electrode portion. Or, get an optional cabled or more durable electrode, as needed for your application. ASI offers an assortment of pH & ORP electrodes to attach to your pH/ORP TesTrode, depending on your application needs.

pH TesTrode continued on page 3...



Analytical Sensors & Instruments Ltd.

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Chemist Corner

All pH Electrodes need calibration at regular intervals to ensure their accuracy and performance. This is due to the changes that occur in the glass pH sensor over time. Everything from conditioning to temperature to contamination can impact the sensing layer of the glass pH sensor in ways that can decrease the overall accuracy of the electrode. The important elements to understand in the calibration of a pH electrode are:

Slope - The ideal slope for a standard (Nernstian) glass pH electrode is 59.16 mV/pH unit at 25ºC. The slope of a good pH Electrode can usually range from 95% to 103% of this ideal value (the slope is actually a negative value). At least 2 buffers (calibration standards) are needed to establish a calibration slope. Many meters use sophisticated multipoint calibration data to establish specific point-to-point slopes for use in the pH algorithm. As an electrode gets older or fouled its slope will fall out of the acceptable range and should be replaced if cleaning or conditioning does not return it to the acceptable range.

Offset - The perfect pH electrode will have a mV value of 0 in a pH 7.00 Buffer at 25ºC. Any deviation from that ideal value is called offset and most manufacturers allow for a ±30 mV offset specification. As an electrode gets better conditioned, older or fouled, its offset will change. This is the main reason that frequent calibration is necessary. A one-point calibration only adjusts the offset of an electrode. A two or more point calibration usually adjusts both the offset and the slope data for that electrode. If the offset exceeds ±30 mV in pH 7, the ability of the meter to auto recognize buffers will likely fail.

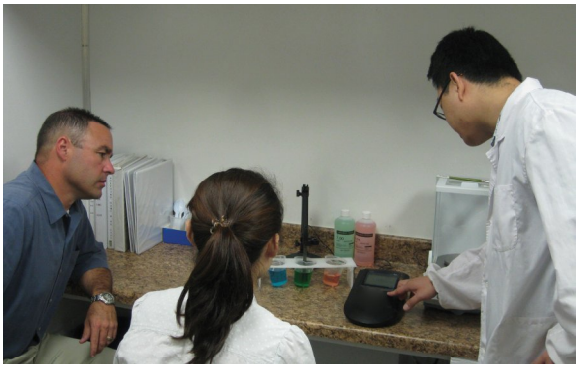
Automatic temperature compensation - Most pH Meters have a built in algorithm to allow for temperature effects on the pH measurement. The pH 4 buffer is much more resistant to temperature effects than the pH 10 buffer. Whenever possible, it is best to try and ensure that calibration buffers are at the same temperature as the sample temperatures. Even better, make sure the electrode is allowed to come to temperature equilibrium with the sample temperature before the measured pH value is recorded.

Automatic Buffer Recognition - Most meters will automatically recognize the buffer value when in a calibration mode. The meter uses the allowable offset specification to make this determination. Some meters may require a buffer type setting allowing the use of NIST Buffers 4.01/7.00/10.01 versus IUPAC Buffers 4.01/6.86/9.18 in the automatic buffer recognition mode. An electrode that is performing poorly may cease to allow automatic buffer recognition to work.

Need a Refresher Course on Electrochemistry?

Electrochemistry can be a tough application in the lab, field or facility. ASI can provide your company's technical support, sales force, or other personnel with a customized training presentation on pH, ISE, DO or Conductivity Electrodes.

Contact your ASI Account Manager to find out more about this service designed to help you be successful with electrochemistry products.



Warranty Question

Question: How do I return a product to ASI for warranty review?

Answer: The first step is to contact our Customer Service Manager and obtain a Return Material Authorization Number (RMA). This will be given if the product falls within the warranty period (Typically, 6 months for an Ion Selective Electrode, 1 year for a Laboratory or Industrial Sensor).

Next, the original product should be returned to ASI (at the customer's expense) with the RMA number noted on the box. ASI will test the electrode and notify you of the results. The product will be repaired or replaced and shipped back to you. If no problem is found, the disposition will be provided for further review.

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ASI's Operations Department

ASI's Operations Department utilized the economic slowdown of 2009 by developing processes and infrastructure to increase manufacturing efficiencies. Encompassing management of purchasing, manufacturing, quality control, assets & facilities and even information technology, the Operations Department ensures that the function and performance of ASI and Aurora are keeping up with expectations of our customers and internal stakeholders. Best practices from our Sugar Land, Texas ASI facility are implemented at Aurora (Shanghai) where our higher volume production and low cost manufacturing capability is a core competency. By working together, daily correspondence and logistics planning both operations are successful in meeting customer needs and delivering quality products in a timely fashion. ASI's Operations Department is led by Frank Zheng and John Pham:

John Pham was recently promoted to ASI's General Manager to continue developing ASI's infrastructure and continuous improvement efforts at ASI. Having graduated from Texas A&M University in 1992 with a B.B.A. in Management Information System, John Pham has 15 years of IT experience and almost 2 years of account management experience. John spent the first five years of his career working on legacy system from System 36 to IBM 3090. John spent the next 10 years working as a SAP R/3 developer using SAP's proprietary ABAP language and Oracle database.

Frank Zheng is ASI's Vice President of Operations. Frank joined ASI in 1994 and has served in various roles from lab technician to machine operator to his current role as Vice President. In 2008, Frank and his wife Amy (also an ASI employee in the engineering department) moved to Shanghai where he is on assignment directing the operations of Aurora, further synchronizing the goals and business management practices between ASI and Aurora.

...pH TesTrode continued from page 1

The display is easy-to-read and large (one of the largest in the industry). You can see either pH or ORP simultaneously with the temperature (°F or °C) as well as the date, time and other measurement details. The display is even backlit so measurements at night or in low-light conditions are easy to read – when was the last time you saw these features in a pH Tester?

The pH/ORP TesTrode also makes use of the date and time stamp on each of its available 25 memory points making it easy to store and recall data for your critical record keeping requirements.

The pH/ORP TesTrode can be private-labeled for your company if needed. We are taking orders for the pH/ORP TesTrode now and later this year we will launch other parameters including:

- Conductivity/TDS/Salinity
- Dissolved Oxygen
- Ion Selective

Contact your ASI Account Manager to learn more about this and other exciting new product from Analytical Sensors & Instruments.

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RETURN SERVICE REQUESTED

From the President's Desk

Dear Customers and Friends:

ASI has been very busy in 2010 and enjoying good success, especially compared to the same time last year. In March, we were excited to launch the new pH TesTrode at Pittcon. This is a technology-expanding addition to our product line that will give our customers an affordable, full-featured tester and of course an assortment of sensors that can be customized to their application requirements. More parameters for this tester platform are in development as I write this and we look forward to your feedback on this and other new products.

I was also able to attend the ARABLAB trade show in Dubai, and we had representation at Analytica (Germany) and CISILE (China) this year. My staff and I enjoy meeting with current and prospective customers at these events and are available to visit your facility to meet with you or provide training on the science of electrochemistry.

Some of you will notice that I have resumed the President function at ASI. This change comes with the support of my staff to simplify our executive management roles. I continue to have an active role in all aspects of ASI's and Aurora's day-to-day activities and look forward to interacting with you, our customer, whenever possible. After all, without you our success is not possible.

I sincerely praise the Lord for this world and thank all of our customers for your ongoing support and confidence.

Peter Cai
President and CFO