

Morning Session

9:30 - 12:00 pH and Ion Selective Electrodes

Rick Noone, Thermo Scientific

PerpHecT pH

A brief discussion of pH theory will lead to a practical discussion of electrode selection, calibration suggestions, care and maintenance ideas, and measurement hints. An update of the newest pH technologies such as ISFET pH, LogR temperature compensation, and AquaPro electrodes will be given.

ISEasy Ion Selective Measurements

An overview of Ion Selective Electrode (ISE) technology will be presented along with a discussion of practical applications using ISE's. Care and maintenance recommendations, troubleshooting ideas, and the newest in ISE electrode technology will be demonstrated.

These classes are designed for all user levels. They are designed to provide a comprehensive overview of each particular technology, specific applications information, and important general usage information to optimize analytical results. This seminar will also include hands-on wet workshops for each of the five topics

All attendees will receive an attendance certificate.

Afternoon Session

1:00 - 3:30 Conductivity, Dissolved Oxygen, and Colorimetric Measurements

Conductivity Measurement

Conductivity theory and measurement principles will be presented along with an overview of common conductivity applications. Calibration temperature compensation, & 2-electrode vs. 4-electrode cell technology will be discussed. A summary of USP 645 protocols for pure water testing will also be given.

Dissolved Oxygen Measurement

Dissolved oxygen (DO) theory will be presented along with an overview of common factors involved in obtaining accurate DO measurements. Proper calibration, care & maintenance of DO probes, & temperature compensation will be discussed. The advantages of polarographic vs. galvanic probes will also be presented, in addition to a brief explanation of optical DO.

Colorimetric Measurements

Colorimetry theory will be presented along with an overview of the application issues relating to accurate colorimetric measurements. Common water testing chemistries will be shown in addition to practical calibration & measurement hints that ensure fast, accurate measurements. EPA accepted methodologies will also be discussed.

REGISTRATION FORM

Company: _____

Name: _____

Address: _____

Phone#: _____ Fax#: _____

Member: _____ Non-Member: _____

Additional Registrants: _____

Total Registration Fee included: \$ _____

RETURN TO: PaAAEL
316 Roosevelt Street
Sayre, PA 18840

**ALL FEES MUST BE PREPAID AND
RECEIVED NO LATER THAN
October 20, 2008.**

Member's fee for the first attendee: \$90.00
(Dues **must** be current)

Additional attendees from member lab: \$80.00

Non-Member Fee: \$150.00

PaAAEL TIN# 23-2469609

Fees are non-refundable after Oct. 22, 2008.

**Fees may be paid by check—to PaAAEL—
or by Visa, MC, Discover or Amer. Express.**

Registration fee includes lunch. Overnight accommodations are the responsibility of the registrant. For additional information about the seminar call (570)888-4768/Fax (570)882-8538

Cancellation Policy:

Cancellation **MUST** be received in writing. Those postmarked less than five days prior to the event will be subject to a service charge of \$35. Registrants who fail to attend and do not cancel prior to the event are liable for the entire registration fee. You may send a substitute.

Directions and Hotel Information

From Harrisburg: Take Route 283 East to Route 30. Follow 1.5 miles to Lititz Pike/Oregon Pike exit. Follow exit to 2nd light. Turn left and proceed under the Route 30 overpass to first light. Take a right and hotel is on the right.

From Allentown: Take Route 222 South to Route 30 West. Follow for 1/4 mile. Take Route 272 (Oregon Pike). Turn right off the exit. Hotel is on the right.

Reservations for the Eden Resort can be made by calling (717)560-8400. The corporate rate for attendees is \$94.95 for a single or double. **This room block will be held until October 4th.** Please tell them you are with PaAAEL.

PaAAEL Quarterly Meeting

The PaAAEL quarterly meeting will be on October 28th in Lancaster. Aaren Alger from PADEP will give an update on the certification program. Waters will present “Practical Solutions for Environmental Applications,” EST Analytical will present “Optimal Conditions for USEPA Method 8260 Analysis – Confronting New Issues” and Lisa Daniels from the Water Supply & Wastewater Management group will give a regulatory update.

Water & Wastewater Contact Hours

PaAAEL is a sponsor of water and wastewater operator training in Pennsylvania. Contact hours are pending.



Pennsylvania
Association of Accredited
Environmental Laboratories
316 Roosevelt Street • S. ayre, PA 18840



The Pennsylvania Association of Accredited Environmental Laboratories

*in co-operation with
Thermo Scientific presents a*

Water Analysis Workshop

9:00 a.m. - 3:30 p.m.

October 27, 2008

Eden Resort, Lancaster, PA