



Experience that Matters....

Conductivity, ISE and pH Measurement Systems

The staff at Quest Product Development has worked on a number of medical (Class II) and nonmedical products associated with the electrochemistry market place. These products include traditional pH meters, multi-parameter water quality meters, and bench top titrators utilized in the analytical and industrial laboratory. Critical elements in the design and development of all of these systems include:



- Understanding methods for making accurate electrochemical measurements
- Application of the Nernst Equation for pH and ion specific electrodes (ISE)
- In-depth knowledge of material properties for sensing, reference electrodes and liquid junction design
- High impedance amplifier design, processor interface, board layout, etc.
- Industrial design of hand held and bench-top devices
- Low voltage AC design environments
- Compliance with 21 CFR 820, design controls, ISO-13485, and compliance with other applicable standards (IPX67 or NEMA 4)
- Custom probe design (conductivity, ISE and pH)
- Driving and sensing conductivity and pH probes
- Software user interface design for hand-held devices
- Embedded software development for hand held devices
- Wireless communication for hand held devices (802.11 b/g, BlueTooth, HL7)

Technical Experience

Key technical experience in the electrochemical market place includes:

- Design of numerous custom electrodes
- Handheld multi-parameter meters
- Bench-top analytical titration systems
- Volumetric and coulometric Potentiometric, Acid-Base and Karl Fisher Titrators
- Ultra pure water systems and monitors
 - ♦ 1 S/cm to 0.01 μ S/cm (2 or 4 electrode)

