

NTHRYS WORKSHOPS.

Potentiometry and Ion-Selective Measurement Techniques Workshop

Workshop Index Duration: 1 DAY

Use the index to navigate the workshop sections and open quick reference modals for scope, audience, outcomes, delivery, policies, and FAQs.

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Quick Summary

Clinical Chemistry Concept To Practice Method Focused

Electrochemical Testing Principles for Potentiometric Ion Measurement

Understand the principles of electrochemical analysis, electrode potential, and ion-selective sensing in routine laboratory workflows.

Electrochemistry Ion Sensing

Review how reference electrodes and measuring electrodes work together to generate stable analytical signals.

Electrode System Signal Stability

Learn the clinical importance of sodium, potassium, chloride, and related electrolyte measurements using ion-selective methods.

Electrolytes Clinical Relevance

Examine calibration, slope behavior, response range, and common interference factors that affect analytical reliability.

Calibration Interference Control

Connect potentiometric methods to result interpretation, troubleshooting, and quality control review in laboratory settings.

Result Review QC Understanding

Overview

Analytical Science Interactive Learning Applied Outcomes

Workshop Scope, Audience Profile, and Learning Outcomes

This workshop introduces potentiometry as a practical electrochemical method for direct and indirect ion measurement.

Potentiometry Ion Measurement

Participants explore the role of membrane selectivity, reference stability, sample activity, and measurement conditions.

Membrane Selectivity Measurement Conditions

The session suits students, technicians, analysts, and laboratory personnel working with electrolyte and ion analysis.

Students Laboratory Personnel

By the end of the workshop, attendees can explain electrode function, calibration steps, and signal interpretation basics.

Electrode Function Signal Interpretation

Attendees also learn to identify common method limitations, matrix effects, and troubleshooting indicators.

Matrix Effects Troubleshooting

Outcome discussions strengthen analytical confidence in routine ion-selective electrode based testing environments.

Analytical Confidence ISE Practice

Agenda

Lab Methods Hands On Practice Ready

Agenda Flow and Hands-on Demonstrations

Modules cover electrochemical fundamentals, Nernst response, electrode construction, and ion-selective membrane behavior.

Nernst Equation Electrode Design

Participants review calibration sequence, slope checks, control materials, and interpretation of measurement output.

Slope Check Control Review

Hands-on discussions demonstrate sample preparation logic, maintenance points, and error recognition in ion analysis systems.

Sample Handling Maintenance Checks

Exercises include identifying drift, contamination, protein effects, carryover concerns, and abnormal control behavior.

Error Detection Carryover Review

Case-based practice links electrolyte values to clinical interpretation and method performance assessment.

Case Practice Clinical Interpretation

The session concludes with documentation points, instrument care guidance, and routine workflow optimization tips.

Documentation Workflow Optimization

Deliverables

Reference Support Workshop Output Learner Ready

Deliverables, Support Material, and Frequently Asked Questions

Participants receive structured notes on potentiometric principles, electrode behavior, calibration, and common error patterns.

Study Notes**Method Review**

Reference sheets summarize ion-selective electrode workflow, performance checks, and troubleshooting logic.

Reference Sheets**Troubleshooting Logic**

FAQ coverage explains whether prior electrochemistry knowledge is needed and how beginners can follow the session.

Beginner Friendly**Entry Level**

Additional FAQs address sample types, calibration needs, interference concerns, and quality control interpretation.

Sample Types**QC Interpretation**

The workshop helps learners build stronger technical language for electrolyte reporting and analytical discussion.

Technical Language**Analytical Reporting**

Participants leave with a clearer framework for routine ion-selective measurement and performance review.

Routine Testing**Performance Review**

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