

SYLLABUS

AutoPore 95XX Operator Training

INSTRUCTIONAL GOALS

This course introduces students to the components, operation, and theory of the AutoPore for Mercury Porosimetry.

At the end of this course, you will:

- Be able to identify and power up the system, including installation of the operating program.
- Understand the basic fundamentals of mercury porosimetry.
- Understand how to safely handle mercury with the instrument.
- Understand the basic fundamentals of AutoPore operation and be able to properly analyze a sample of reference material.
- Understand how to use the operating software with a PC in order to operate the AutoPore.
- Be able to properly configure any report format, a combination of reports, and obtain analysis information according to your laboratory requirements.
- Be able to perform all user level maintenance, and locate equipment problems using the Troubleshooting section of the Operator's manual.

NEEDS AND RESOURCES

Required Background

To successfully complete this course, you must:

- Have some minimal exposure to an AutoPore in a laboratory environment.
- Have reviewed the Operator's manual.

Required Materials

The following provided materials will help you successfully complete this course:

- Operator Training Study Guide with Lecture Presentations
- Notepad
- Pen
- Highlighter
- Micromeritics Thumb Drive containing presentations , relevant application notes and Study Guide

Additional Print Resources

The following publications will also be provided:

- Webb, Paul A. and Clyde Orr. *Analytical Methods in Fine Particle Technology*. Norcross, Georgia, U.S.A.: Micromeritics Instrument Corporation, 1997.
- Related Application Notes and Technical Tips.

Online Resources

Additional information can be found at: www.micromeritics.com

COURSE SCHEDULE

Day 1

Session	Room	Activity	Approximate Time
-	LECTURE	Introduction	8:00 AM – 8:15 AM
1	LECTURE	General Overview, Basic Applications, Similar Instruments	8:15 AM – 8:45 AM
2	LAB	System and software overview Penetrometer assembly Blank error and correction Penetrometer calibration	8:45 AM – 10:15 AM
	LECTURE	Mercury Intrusion Theory	10:15 AM – 11:30 AM
-	-	LUNCH	11:30 AM – 1:00 PM
3	LAB	Setting up Penetrometer properties files Critical factors of sample preparation	1:00 PM – 2:00 PM
4	LAB	Preparation and analysis of silica alumina using formula correction	2:00 PM – 3:30 PM

Day 2

Session	Room	Activity	Approximate Time
-	LECTURE	Day 2 Introduction and Brief Questions/Review of Day 1	8:00 AM – 8:15 AM
1	LAB	The programming and use of parameter files Prepare and analyze Si/Al samples using Intrusion and pressure scan mode	8:15 AM – 10:30 AM
2	LECTURE	Applied Materials	10:30 AM – 11:30 AM
-	-	LUNCH	11:30 AM – 1:00 PM
4	-	FACILITY TOUR	1:00 PM – 2:00 PM
5	MICRO-ACTIVE	Si-Al Data Analysis Report Overlays using generated data.	2:00 PM – 3:00 PM

Day 3

Session	Room	Activity	Approximate Time
-	LECTURE	Day 3 Introduction and Brief Questions/Review of Day 1 & 2	8:00 AM – 8:15 AM
1	LAB	Practical Exercise- Independent HP Analysis of Intrusion Scan Sample	8:15 AM – 9:00 AM
2	LECTURE	A Review of Report Options, Data Reduction and Class-Generated Results	9:15 AM – 11:15 AM
-	-	LUNCH	11:30 AM – 1:00 PM
3	CASE STUDIES	Group work: Build specific .smp files, solutions for bad data, etc.	1:00 PM – 2:00 PM
5	SERVICE	Service- A discussion of installation, calibration, and operator maintenance	2:00 PM – 3:30 PM
5	ASSESSMENT	Class assessment & survey	3:30 PM – 4:00 PM

POLICIES AND PROCEDURES

General Rules:

Attendance to all scheduled lectures and labs is very important due to the length of the course. Please make every attempt possible to avoid tardiness. If you do come in late, please enter through the rear door of the classroom so as to not disrupt or distract your fellow students. If you are unable to attend a day or part of a day due to emergency, please notify the Training Coordinator immediately.

Remember, you and/or your company have a business need for you to attend and complete this course to insure that you are getting the most out of your/your company's investment in your Micromeritics instrument.

Grading Policies:

You will be periodically evaluated throughout the course during oral discussions and demonstrations. There are also questions in your Operator Training Study Guide that will be discussed at the completion of each unit. Please be prepared to answer questions about the previous lessons content. A brief assessment exam will be given at the end of the course to verify that learning objectives are met by each student.

Grading Scale:

There is no grading scale for this course and you will not fail. Again, you and/or your company have a business need for you to attend and complete this course to insure that you are getting the most out of your/your company's investment in your Micromeritics instrument .

ADDITIONAL INFORMATION

Lunch will be provided by Micromeritics. Please inform the Training Coordinator of any special dietary needs.

CONTACT INFORMATION

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