

SYLLABUS

AutoChem II 2920 Advanced Operator Training

INSTRUCTIONAL GOALS

This course introduces students to advanced chemisorption theory, applications and ASAP 2920 use with a Mass Spectrometer.

NEEDS AND RESOURCES

Required Background

To successfully complete this course, you must:

- Have regular exposure to an AutoChem II in a laboratory environment
- *or*
- Have completed the AutoChem II Standard Operators Training Course.

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.micro.edu

COURSE SCHEDULE

Day 1

Session	Room	Activity	Approximate Time
1	LECTURE	Lecture - Acid Site Characterization	8:30 AM to 10:00 AM
2	LAB	Propene calibration	10:00 AM to 11:30 AM
-	-	LUNCH	11:30 AM to 1:00 PM
3	LECTURE	Mass Spectrometer Theory.	1:30 PM to 2:45 PM
4	LECTURE	TPR flow rates	2:45 PM to 3:45 PM
5	LAB	Temperature Programmed Reduction # 1 (Copper Oxide)	3:45 PM to 4:15 PM

Day 2

Session	Room	Activity	Approximate Time
1	LECTURE	Temperature Programmed Surface Reactions	8:30 AM to 10:00 AM
2	LAB	TPSRs	10:00 AM to 11:00 AM
3	LAB	Temperature Programmed Reduction # 2 (Copper Oxide-change flow rate)	11:15 AM to 11:30 AM
-	-	LUNCH	11:30 AM to 1:00 PM
4	LECTURE	TPSR Products	1:00 PM to 2:30 PM
5	LECTURE	TPR calculations, review of results (acid sites, TPSR and TPR)	2:30 PM to 3:30 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 (accessible from the laboratory) 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 MLC 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 student assessment checklist will be completed by the instructor to verify that course 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 MLC Training Coordinator of any special dietary needs.

CONTACT INFORMATION

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- <http://www.micro.edu>