


Quantachrome

INSTRUMENTS

Characterizing Porous Materials and Powders

2010 Training Courses





Instrument	Dates	Description	Price
Aquadyne DVS 	March 22-23 September 13-14	The following topics will be covered during the 2-days: <ul style="list-style-type: none"> • Instrument installation / safety • Sample preparation for water sorption measurements • Instrument calibration • Physisorption / water sorption (Types of water isotherms; hydrophilic/hydrophobic surfaces) • Instrument operation - isotherm measurement (Surface area/porosity characterization; temperature dependence– heats of adsorption; water sorption hysteresis) • Instrument maintenance. 	\$1,600
	February 8-9 May 17-18 August 9-10 November 1-2	The following topics will be covered during the 2-days. <ul style="list-style-type: none"> • Instrument installation/safety • Sample outgassing • Physisorption theory • Instrument and ASiWin software operation- Surface area /mesopore characterization • Micropore characterization • Data reduction models: Surface area (BET method), t-plot methods, BJH poresize distribution calculations, DFT methods (micropore characterization) • Instrument maintenance. 	\$1,600
Autosorb iQ 	February 12 May 21 August 11 November 3	Optional Class The following topics will be covered during the one day: (Choice of one operation listed below.) <ul style="list-style-type: none"> - Cryostat operation or - Vapor sorption 	\$800
	February 10 May 19 August 12 November 4	The following topics will be covered during the one day: <ul style="list-style-type: none"> • Sample pretreatment for chemisorption • Instrument and ASiWin software operation • Chemisorption isotherms • Metal area, dispersion, cluster size. 	\$800
Autosorb-iQ-C 	February 11 May 20 August 13 November 5	Optional Class (Autosorb-IC or Autosorb-iQ-C,) These classes run concurrently. Choose one. The following topics will be covered during the one day: TCD option and/or Mass spectrometer	\$800

Quantachrome Instruments
 1900 Corporate Drive
 Boynton Beach, FL 33426
 (t) 561.731.4999
 (f) 561.732.9888
 qc.training@quantachrome.com

	M	T	W	Th	F
January		19	20	21	22
February	8	9	10	11	12
March	22	23	24	25	26
April	19	20			
May	17	18	19	20	21
May/June	31	1	2	3	
August	9	10	11	12	13
September	13	14			
October	18	19	20	21	22
November	1	2	3	4	5
December	6	7	8	9	10

- Aquadyne DVS
- Autosorb Series
- ChemBET Pulsar
- Quadrasorb SI/Nova e
- PoreMaster
- Pycnometers

Detailed yearly calendar available, go to:
www.quantachrome.com/yearlyplanner.html

Instrument	Dates	Description	Price
ChemBET - Pulsar 	June 2-3 December 6-7	The following topics will be covered during the 2-days: <ul style="list-style-type: none"> • Instrument installation/safety • Sample preparation – reduction (chemisorption), degassing (physisorption) • Chemisorption / physisorption theory • Pulse Chemisorption measurements – active surface area determination, dispersion, average crystallite size • Physisorption methods (Multi-point BET measurements) • Temperature programmed analyses (TPR, TPO, TPD) • Data reduction methods • Instrument maintenance. 	\$1,600
Nova Series / Quadrasorb SI 	January 21-22 March 24-25 May 31-June 1 October 20-21 December 8-9	The following topics will be covered during the 2-days. These classes run concurrently. Choose one. <ul style="list-style-type: none"> • Instrument installation / Safety • Sample preparation for physisorption measurements • Physisorption theory • Protocols for surface area / mesopore characterization, micropore characterization • Data reduction models: Surface area (BET method), t-plot methods, BJH & DFT pore size distribution calculations • Instrument maintenance. 	\$1,600
PoreMaster 	January 19-20 April 19-20 October 18-19	The following topics will be covered during the 2-days. <ul style="list-style-type: none"> • Instrument installation • Mercury safety • Sample preparation for mercury porosimetry • Sample cell selection • Mercury porosimetry theory • Instrument operation – low pressure measurements • Instrument operation – high pressure measurements • Instrument operation – density measurements • Data reduction models • Instrument maintenance. 	\$1,600
Pycnometers 	March 26 October 22 December 10	The following topics will be covered. <ul style="list-style-type: none"> • Instrument installation/sample preparation for volume and density measurement of porous solids and powders, catalysts, pharmaceuticals, ceramics, carbons, building materials, rock core plugs, etc • pycweb/pycwin software • Instrument maintenance. 	\$800

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Hotels:

Hampton Inn & Suites Boynton Beach (4 miles)
 Approx. cost: \$99-130 per night*
 1475 West Gateway Blvd., Boynton Bch., FL 33426
 Tel: 561.369.0018 • Fax: 561.738.5235
 1-800-HAMPTON

* Price subject to revision/change; excludes taxes.
 Ask for Quantachrome Corporate Rate.

Marriott Delray Beach (5.5 miles)
 10 North Ocean Blvd., Delray Bch., FL 33483
 Tel: 561.274.3200 • Fax: 561.274.3202

Course Hours:

Training courses run from 9:00 am to 5:00 pm each day. Daily transportation between the Hampton Inn and our facility will be provided at no additional charge if you prefer not to drive yourself.

Attire Requirements:

Please be advised, that hands-on/practical part of the training is held in the laboratory. For safety reasons, all training participants are required to wear lab-appropriate attire (**closed-toe/ heal shoes and long pants**). Safety eye-protection and lab coats are provided during the training.

Directions from Hampton Inn (Gateway Blvd.) to Quantachrome:

Turn RIGHT out of the hotel parking lot onto Gateway Blvd. Move immediately into the LEFT lane for LEFT turn at first light onto Congress Avenue (South). Proceed South on Congress Avenue (~2.25 miles) to Woolbright Road (Mobil gas station on right, northwest corner). Make a LEFT heading East on Woolbright, proceed ~ 3/4 mile. Turn RIGHT onto Corporate Drive 1/4 mile BEFORE I-95 (Racetrac gas station on left side of Woolbright, LOWE'S Home Improvement Center on far side of Corporate Dr) Proceed down Corporate Drive (~ 500 yds); Quantachrome (third yellow building) on LEFT.

General Information:

Quantachrome's headquarters are located at
 1900 Corporate Drive, Boynton Beach, Florida 33426.

Airports:

We are located about 10 miles south of Palm Beach International Airport (PBI) and 30 miles north of Fort Lauderdale International Airport (FLL).

Directions from Airports:

Follow the signs from airport to I-95 (PBI take I-95 South and from FLL take I-95 North). Follow I-95 to exit 56, Woolbright Road. Go west to first traffic light. Turn left (south) on Corporate Drive (see LOWE'S Home Improvement Store on Southeast corner). Proceed down Corporate Drive (~ 500 yards), Quantachrome (third yellow building) on left.

For more information call us at 561.731.4999, visit us at www.quantachrome.com/ots.html or email us at qc.training@quantachrome.com

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OPERATOR TRAINING COURSES

Order Registration Form



Name: _____ Date: _____

Company: _____ Purchase Order #: _____

Phone: _____ Fax: _____ Email: _____

INSTRUMENT	CODE NUMBER	NUMBER OF PERSONS	DATE	ATTENDEE NAME(S)	PRICE EACH(\$)	TOTAL PRICE(\$)
Autosorb Series	TRAINING-IN-AS (2 days)				\$1,600	
Autosorb- (optional class)	TRAINING AS (Optional- 1day)				\$800	
Autosorb-C	TRAINING-IN-ASC (1 day)				\$800	
Autosorb-C (optional class) (Choose one-circle: AS1C or iQ-C)	TRAINING ASC (Optional- 1day)				\$800	
Nova / Quadrasorb (Choose one-circle one)	TRAINING-IN-N (2 days) TRAINING-IN-Q (2 days)				\$1,600	
ChemBET Pulsar	TRAINING-IN-CBET (2 days)				\$1,600	
PoreMaster Series	TRAINING-IN-PM (2 days)				\$1,600	
Aquadyne DVS	TRAINING-IN-AD (2 days)				\$1,600	
Pycnometer	TRAINING-IN-Pyc (1 day)				\$800	

For course dates, please visit our website at www.quantachrome.com or email qc.training@quantachrome.com.

All courses take place at Quantachrome's corporate headquarters in Boynton Beach, Florida. Course fees include transport between local hotels and headquarters. Please indicate below if you will be renting a car and do not require transport (no refund for unused transport offer). Attendees are responsible for their own transportation to Boynton Beach and for hotel reservations. You are welcome to email us for recommendations.

I/we **do not** need to be picked up/dropped off at local hotel. I/we **do** need to be picked up/dropped off at local hotel.

Lunch is also included. Please indicate any special dietary requirements:

How did you learn about our instrument training courses? Please choose one:

- Website Flyer (with order)
 Email Notice Flyer (at trade show _____)
 Newsletter Other _____

Recommended Reading:

**Characterization of Porous Solids and Powders:
Surface Area, Pore Size and Density (ISBN 1-4020-2302-2)**



This book gives a unique overview of principles associated with the characterization of solids with regard to their surface area, pore size and density. The book covers methods based on Gas Adsorption (Physi- and Chemisorption), Mercury Porosimetry and Pycnometry. Not only are the theoretical and experimental basics of these techniques described, but also the most recent developments, particularly in light of the tremendous progress made in recent years in Materials Science and Nanotechnology.

The application of classical theories and methods for pore size analysis are discussed in contrast with the most advanced microscopic theories based on statistical mechanics (e.g. Density Functional Theory and Molecular Simulation). The book will appeal both to students and to scientists in industry who are in need of accurate and comprehensive pore and surface area characterization of their materials.



To order a copy, or for more information, go to www.quantachrome.com and click on the book banner ad.

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