# MICROACTIVE ASAP® 2020 PLUS

ACCELERATED SURFACE AREA AND POROSIMETRY SYSTEM



# micromeritics<sup>®</sup>

# Effective Solutions for Material Characterization

PREINSTALLATION INSTRUCTIONS AND CHECKLIST

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### **CORPORATE PROFILE**

Micromeritics Instrument Corporation is a leading global provider of solutions for material characterization with best-in-class instrumentation and application expertise in five core areas: density; surface area and porosity; particle size and shape; powder characterization; and catalyst characterization and process development.

Founded in 1962, the company is headquartered in Norcross, Georgia, USA and has more than 400 employees worldwide. With a fully integrated operation that extends from a world class scientific knowledge base through to inhouse manufacture, Micromeritics delivers an extensive range of high-performance products for academic research and industrial problem-solving.

Under its premium brand Particulate Systems, Micromeritics discovers and commercializes unique and innovative material characterization technologies that are complementary to core product lines.

The company's holistic, customer-centric approach also extends to a cost-efficient contract testing laboratory – the Particle Testing Authority (PTA). The strategic acquisitions of Freeman Technology Ltd and Process Integral Development S.L. (PID Eng & Tech) reflect an ongoing commitment to optimized, integrated solutions in the industrially vital areas of powders and catalysis.

Freeman Technology (Tewkesbury, UK) brings market-leading powder characterization technology to Micromeritics' existing portfolio of particle characterization techniques. The result is a suite of products that directly supports efforts to understand and engineer particle properties to meet powder performance targets. With over 15 years of experience in powder testing, Freeman Technology specializes in systems for measuring the flow properties of powders. In combination with detailed application know-how these systems deliver unrivalled insight into powder behavior supporting development, formulation, scale-up, processing and manufacture across a wide range of industrial sectors.

PID Eng & Tech (Madrid, Spain) complements Micromeritics' renowned offering for catalyst characterization with technology for the measurement and optimization of catalytic activity, with a product range that extends to both standard and bespoke pilot scale equipment. Launched in 2003, PID Eng & Tech is a leading provider of automated, modular microreactor systems for the detailed investigation of reaction kinetics and yield. These products are supported by a highly skilled multidisciplinary team of engineers with in-depth expertise in the design, construction and operation of laboratory units and process scale-up.

The Particle Testing Authority (PTA) provides material characterization services for fine powders and solid materials using Micromeritics' instrumentation alongside complementary solutions from other vendors. With the certification and expertise to operate across a wide range of industries the PTA offering runs from single sample analysis to complex method development, method validation, new product assessment, and the analytical support required for large scale manufacturing projects. An experienced, highly trained team of scientists, engineers, and lab technicians works closely with every client to ensure that all analytical requirements are rapidly and responsively addressed.

Micromeritics has a strong global network with offices across the Americas, Asia, and Europe complemented by a dedicated team of distributors in additional locations. This ensures that local, knowledgeable support is available for every customer, in academia or industry. Micromeritics works across a truly diverse range of industries from oil processing, petrochemicals and catalysts, to food and pharmaceuticals, and at the forefront of characterization technology for next generation materials such as graphene, metal-organic-frameworks, nanocatalysts, and zeolites. Engineering solutions that work optimally for every user is a defining characteristic of the company.



# CONTACT US

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### ABOUT THIS MANUAL



All references to ASAP 2020 Plus in this document encompass the ASAP 2020 Plus, MicroActive Share for ASAP 2020, and ASAP 2020 Plus Confirm environments unless otherwise noted.

The following symbols indicate safety precautions and/or supplemental information and may appear in this manual:



**NOTE** — Notes contain important information applicable to the topic.



<u>CAUTION</u> — Cautions contain information to help prevent actions that may damage the analyzer or components.



<u>WARNING</u> — Warnings contain information to help prevent actions that may cause personal injury.

# CFR Note

**NOTE** — Notes that apply to 21CFR11 environments only (Confirm applications).

Only physical adsorption options are supported when the software is installed in 21CFR11 environments.



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# 1 Pre-installation Document Overview

This document describes how to prepare a site for installation of the ASAP 2020 Plus for both standard and 21 CFR Part 11 (Confirm) environments. If Micromeritics will be performing this installation, when the enclosed procedures have been completed, return the signed and dated form to Micromeritics as outlined in <u>Dates and Signatures on page 6 - 1</u>. If unsure about any part of this document or the checklist, contact the Micromeritics Service Department for clarification.

The following chart indicates the applicable sections for your type of installation:

Section		Installation Type	
	Std	Cfr	
Pre-installation Document Overview above.	✓	✓	
<u>Pre-installation Instructions — All Environments on page 2 - 1</u> . Contains instructions to help analyze the installation site.	~	✓	
<u>Pre-installation Checklists on page 3 - 1</u> . Contains questions and a checklist for the installation site.	~	✓	
<u>Pre-installation Instructions — 21CFR11 Environments on page 4 - 1</u> . Contains information to help analyze the installation site for 21 CFR Part 11 environments.		<b>✓</b>	
<u>Pre-installation Checklist</u> — <u>21CFR11 Environments on page 5 - 1</u> . Contains questions and a checklist for the installation site for 21 CFR Part 11 environments.		✓	
<u>Dates and Signatures on page 6 - 1</u> . For use when Micromeritics will be performing this installation. Read this entire document carefully. Complete all checklists. Sign and return the form in this section to Micromeritics. Micromeritics will contact you to confirm an installation date.	✓	<b>✓</b>	



#### MICROMERITICS INSTALLED INSTRUMENTS ONLY

#### APPLICATION RELATED ISSUES

To ensure a thorough installation, it will be helpful for Micromeritics to know which types of samples will be tested. If known, list them in *Application Related Issues Checklist on page 3 - 5*.

Please advise Micromeritics if samples require any pretreatment. If required, do you have the proper equipment to pretreat your samples? Micromeritics offers application assistance through our materials analysis laboratory (Micromeritics Particle Testing Authority).

#### HAZARDS AND PRECAUTIONS

Inform Micromeritics of any on-site conditions that may present hazards to Micromeritics employees or equipment. Advise Micromeritics of any precautions that need to be taken.

#### SAFETY MEASURES

Inform Micromeritics of any safety equipment, requirements, or procedures necessary for Micromeritics employees to enter and install the system at your facility.

#### Personnel Security Clearance

If security clearances, insurance certificates, or any other special arrangements are required for Micromeritics employees to enter your facility, see <a href="Personnel Security Clearance Checklist on page 3 - 5">Personnel Security Clearance Checklist on page 3 - 5</a> to explain. Inform Micromeritics how much advance notice you require to obtain clearance.

#### PROJECTED INSTALLATION DATE

Read this entire document carefully. Complete all checklists in this document. Sign and return all checklists and the form in <u>Dates and Signatures on page 6 - 1</u> to Micromeritics. Micromeritics will contact you to confirm an installation date.



# 2 Pre-installation Instructions — All Environments

#### UNPACKING AND INSPECTION

When the equipment is received, unpack and inspect the contents of the shipping container(s). Use the packing list to verify that all products, accessories, software (if applicable), and documentation are received intact and in the correct quantity. The shipping container(s) and contents should be inspected within a few days of receipt in the event damage or loss has occurred. Sort through all packing material before declaring missing equipment or parts.



Micromeritics recommends saving all shipping containers until installation of the equipment is complete. All shipping containers where equipment is to be declared as damaged or lost must be examined by the claims investigator prior to completion of the inspection report.

#### SHIPPING DAMAGE

If equipment is damaged or lost in transit, you are required to make note of the damage or loss on the freight bill. The freight carrier, not Micromeritics, is responsible for all damage or loss occurring during shipment. If damage or loss of equipment is discovered during shipment, report the condition to the carrier immediately. Insurance claims **MUST** be made with the freight carrier, **NOT** Micromeritics.

- Keep all software, manuals, and accessories with the equipment.
- Report any shipping damage immediately to the carrier and follow their directions.
- Report missing or wrong parts to Micromeritics, in addition to any shipping damage, only after filing a claim with the carrier.
- Micromeritics will NOT file a claim for shipping damage.
- Do not discard shipping boxes and containers until installation is complete. If space is available, it
  is recommended that shipping containers be saved for future use in the event of return to factory
  for repair.



#### ANALYZER SPACE - ASAP 2020

A unobstructed lab work space that will accommodate the equipment is required.



**Physical Adsorption** 



**Chemical Adsorption** 

#### **Analyzer**

Height 99 cm (39 in.)
Width 85 cm (33.5 in.)
Depth 61 cm (24 in.)
Weight 115 kg (250 lbs.)

#### **Degas Unit (optional accessory)**

Width 50 cm (20 in.) Approx. Depth 40 cm (16 in.) Approx.

#### **Computer and Printer**

Width 96.5 cm (38 in.) Approx.

#### **Gas Supply**

1 square ft (0.1 square m) for each gas cylinder needed for installation. For standard installations, the cylinders must be within 6ft. (2m) of the instrument.

#### **External Vacuum Pump**

Height 17 (7 in.) Approx.
Width 15 cm (6 in.) Approx.
Depth 31 cm (12 in.) Approx.



#### Installation Configuration

Standard installation requires the use of 1/8 in. copper or stainless steel gas supply lines, located in the instrument accessories kit.

A nonstandard installation will be created if another gas supply line is used or if the gas cylinders cannot be placed within 6 ft (2 m) of the analyzer. There may be additional costs associated with a nonstandard installation. Please contact the Micromeritics Service Department at 1-770-662-3666 to discuss a nonstandard installation.

#### **COMPUTER SYSTEM**

We recommend purchasing the computer system from Micromeritics. Micromeritics thoroughly tests operating systems with the Micromeritics applications and offer technical support and maintenance for the computers we provide. For analyzers not installed by Micromeritics, please note:



- The labor and expense costs associated with delays traceable to a computer system not purchased from Micromeritics are not part of a standard installation.
- Micromeritics is not responsible for providing assistance for the connection to a company network or LIMS.
- During installation, Administrator rights will be required to make changes to the Ethernet settings. If access cannot be granted to the Service Technician, an IT representative must be readily available to make these changes or additional charges may apply.

The computer system to be used with the analyzer must meet the following minimum requirements:

- Operating System. Windows 7 Professional or higher operating system is recommended for the best user experience. For 21CFR11 environments, Windows 10 Professional or Windows 10 Enterprise or higher is required.
- **Desktop Installation Required.** The application should not be installed on a network drive with shared access. Multiple users cannot operate the application at the same time.
- 10 Base T or 100 Base T Ethernet Port. If the computer is to be connected to a network, two Ethernet ports are required. If more than one Ethernet based unit is connected to the same computer, an Ethernet switch will also be required.
- Read / Write Permissions. All users of the application will need Read/Write permission to all directories and subdirectories where the application is installed. For 21CFR11 environments, permission may be limited to the installation directory.
- Drives. USB port.



#### **ENVIRONMENTAL FACTORS**

#### **POWER**

The ASAP analyzer is designed to operate with a universal input power supply (100 / 115 / 230 VAC) at 50 or 60 Hz. Noise-free power of the correct voltage and frequency, with a safety earth ground, should be available through a standard wall receptacle. The power outlet should be able to supply 15 amps @ 100 or 115 VAC  $\pm$  10% or 7.5 amps @ 230 VAC  $\pm$ 10%. These requirements can be checked by using a circuit analyzer (available at most hardware or electronic supply houses) or a multimeter. There should also be sufficient outlets for the analyzer, Smart VacPrep (if purchased), vacuum pump system, computer, monitor, printer, and any other peripheral devices.



The analyzer and peripheral devices **must** be installed on their own dedicated power line. Other devices — such as motors, generators, or ovens — **should not** be placed on the same power line.

#### TEMPERATURE AND HUMIDITY

Temperature and humidity must be controlled to within:

• Temperature: 10 to 35 °C (50 to 95 °F) operating; 0 to 50 °C (32 to 122 °F) nonoperating

• **Humidity:** 20 to 80% relative, non-condensing

#### Do Not:

- Allow room temperature or humidity to exceed limits.
- Install the analyzer where it is exposed to direct sunlight.
- Locate the analyzer near air conditioning or heating vents.

#### **VENTILATION**

The area reserved for installation of the instrument should be well ventilated. Access to an exhaust hood or other external ventilation is strongly recommended.



Proper ventilation is particularly important for chemisorption units, where toxic gases generally come from the exhaust port of the vacuum pump. A ventilation system or exhaust hood should always be used for chemisorption analysis.

Consideration should also be given to the need for an exhaust line for the chemisorption sample port.

The compressor needs sufficient air flow.



#### GAS SUPPLY

#### GAS CYLINDERS AND GAS SUPPLY LINES

See <u>Gas for Analyzer Test on page 2 - 9</u> for the analytical gases needed during installation. Gas cylinders must be placed within 6 ft (2 m) of the analyzer inlet valves.

- The customer is required to ensure the purity of gases.
- It is required that the 1/8 in. × 6 ft (2 m) single piece copper gas line in the analyzer accessories kit
  is used. Stainless steel gas lines are available from Micromeritics for use with gases that are not
  compatible with copper.



Gas lines not supplied by Micromeritics will not be installed by Micromeritics Service Personnel.



Gas supply lines made of materials other than copper or stainless steel may cause operational problems.

- **Do not** use gas cylinders with less than 500 psig (3549 kPag) pressure.
- Do not use any other gas lines to connect the gas supply to the analyzer except those supplied in the accessories kit. Use of other gas lines will result in a nonstandard installation. See <u>Install</u>ation Configuration on page 2 - 3.
- **Do not** use gas purifiers; they can cause operational problems. Oxygen traps are preferred.



#### GAS SUPPLY HARDWARE

Micromeritics recommends the gas regulators to be used with the analyzer be purchased from Micromeritics. The regulators Micromeritics provides have been carefully evaluated and tested to provide superior performance.



**For Chemical Adsorption Only** - A vent line for the vacuum pump and analyzer is required. The vacuum line must exhaust to a vent hood or to the outside of the building.



If purchased from a source other than Micromeritics, please keep in mind that many commercially available gas regulators lack key features which are required for gas adsorption measurements. These vital criteria must be met:

- **Cleanliness**. Clean regulators designed specifically for high-vacuum service are required. Other regulators often contain elastomeric material or oils which can contaminate the gas.
- **High stability**. Excess pressure at the gas inlet ports to the analyzer can interfere with accurate gas dosing and flow rates. The combined change in the outlet pressure from the gas regulator, as the gas cylinder pressure decreases or as the flow rate stops, should not change more than 5 psig (34.4 kPag) from the selected setting. When the analyzer is idle for an extended period of time, such as 8 to 10 hours, this same stability of gas delivery pressures should be achieved.
- **Suitable sub-assemblies.** The regulator must have a shutoff or outlet isolation valve compatible with 1/8 in. or 1/4 in. Swagelok compression fittings.



To purchase regulators from Micromeritics, contact your local Micromeritics Sales Representative.



#### REGULATOR EXPANSION KITS

It is sometimes beneficial to attach more than one analyzer, and/or accessory device, or different inlet ports to a single gas supply. Any time this is done, it is critically important that there be a means of isolating, or shutting-off, each device attached to the gas supply regulator. Micromeritics recommends the use of a vacuum rated shutoff/isolation valve for this purpose.

This shutoff/isolation valve is required in order to prevent problems when changing gas cylinders or servicing any of the devices attached to the gas supply.

If the need to attach more than one inlet or one analyzer and/or accessory device is anticipated, one or more of the following regulator expansion kits must be acquired:

- 004-33601-00 Regulator Expansion Kit (2 outlet, 1000 psi maximum). This kit contains one
  T fitting, two vacuum rated shutoff valves, and other necessary hardware. This expansion kit
  allows gas to be provided to two inlets.
- **004-33601-01** Regulator Expansion Kit (3 outlet, 1000 psi maximum). This kit contains one cross fitting, three vacuum rated shutoff valves, and other necessary hardware. This expansion kit allows gas to be provided to three inlets.



#### LABORATORY EQUIPMENT AND SUPPLIES

#### LIQUID NITROGEN

Ensure liquid nitrogen is available in sufficient quantities. A minimum of 10 liters is required for starting an analysis.

- For installation, there **must** be an adequate supply of liquid nitrogen.
- Do not use liquid nitrogen that is either blue (a sign of oxygen contamination) or not clear.

#### ANALYSIS EQUIPMENT AND SUPPLIES

Since the analysis results are expressed in units of surface area per gram of sample, the true mass of the sample must be known. This requires an analytical balance with the capability of 100 grams measurement and 0.1 mg readability.

In order to obtain accurate analysis results, the sample tubes must be clean. The following items are suggested for cleaning sample tubes:

- Alconox<sup>®</sup> or similar laboratory detergent
- Balance for weighing sample
- Brush
- Clean, dry compressed air or dry nitrogen
- Drying oven

- Isopropyl alcohol
- Sink
- Small plastic tub for detergent solution
- Ultrasonic bath

For chemisorption units, a separate supply of dry, clean, oil-free compressed air should be available for furnace cooling.



#### GAS FOR ANALYZER TEST

To verify proper analyzer operation and to train users, Micromeritics representatives will analyze the reference material provided in the analyzer accessories kit.

The following gases are required in order to analyze the reference materials. If these gases are not available, Micromeritics representatives will only be able to perform a limited number of analyzer tests during installation and operator training.



All gases require the indicated purity.

All analyzer types	<b>;</b>	Chemical adsorption units
(CGA 580) N <sub>2</sub> (CGA 580) He (CGA 580) Kr *	99.999% 99.999% 99.995%	All gases listed to the left and:  (CGA 350) H <sub>2</sub> 99.999%  (CGA 350) CO 99.990%
* Krypton needed only	for krypton units	Pre-mix 10% CO in helium (required for Dynamic Chemical Adsorption units only)

Any additional gases that may be used after the installation is complete can be connected by the Micromeritics representative.



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# 3 PRE-INSTALLATION CHECKLISTS

For each question, circle **Yes** if the condition applies to your laboratory or **No** if it does not. When this *Pre-installation Checklist* has been completed, see <u>Dates and Signatures on page 6 - 1</u>. Sign and date the form, then send it along with all completed checklists to Micromeritics.

#### **UNPACKING AND INSPECTION CHECKLIST**

Unpacking and Inspection		
Have the shipping cartons been unpacked and their contents inspected?	Υ	N
Was there any shipping damage?	Υ	N
If <b>Yes</b> , has a claim been filed with the freight carrier?	Υ	N
Were all items on the packing list received?	Υ	N
If <b>No</b> , has Micromeritics been notified?	Υ	N
Was an Ethernet switch purchased with the analyzer or is there one available, if needed?	Y	N

# ANALYZER SPACE CHECKLIST

Analyzer Space		
Can the lab area where the analyzer and computer will be placed accommodate the combined dimensions of the analyzer, accessories, computer, and printer?	Y	N

### INSTALLATION CONFIGURATION CHECKLIST

Gas and Gas Supply Lines		
Will 1/8 in. copper gas supply lines (supplied with the analyzer for standard installation) be used?	Y	N
If <b>No</b> , have 1/8 in. stainless steel gas supply lines been ordered and received from Micromeritics?	Y	N



### **ENVIRONMENTAL FACTORS CHECKLIST**

Environmental Factors		
Is power available with the correct voltage and frequency, and a safety earth ground?	Y	N
Are temperature and humidity controlled within specifications?	Y	N
Are hazards present or precautions necessary in area of installation?	Υ	N
If <b>Yes</b> , please explain:		
Are safety measures required?	Υ	N
If <b>Yes</b> , please explain:		
For chemisorption units, are exhaust lines available?	Υ	N



# GAS SUPPLY CHECKLIST

Gas Supply			
•	unit, a clean compressed air supply at 15 psig with a 1/4 in. I it be available at the instrument?	Y	N
Are gas cylinders loc installed?	ated within 6 ft (2 m) of where the instrument will be	Y	N
Were gas regulators	purchased from Micromeritics?	Y	N
lf <b>No</b> , do your gas reç	gulators meet Micromeritics' specifications?	Υ	N
Required Gases			
Are the following <b>req</b> gases are available:	uired gases available? The installation will not be schedule	d until thes	<u>e</u>
All instrument type	es:		
(CGA 580) N <sub>2</sub>	99.999%	Y	N
(CGA 580) He	99.999%	Y	N
Chemical adsorption	on instruments (in addition to the above gases):		
(CGA 350) H <sub>2</sub>	99.999%	Y	N
(CGA 350) CO	99.990%	Y	N
• Pre-mix 10% CO i	in helium (required for Chemical Adsorption units only)	Υ	N
Optional Gases			
Indicate which of the	following optional gases will be provided during installation:		
Krypton/multigas ι	units (additional gas)		
(CGA 580) Kr	99.995%	Υ	N
Micropore units (ad	dditional gases). Select at least one additional gas.		
(CGA 580) Ar	99.999%	Υ	N
(CGA 580) CO <sub>2</sub>	99.995%	Y	N
Additional Gases			
•	use after installation can be connected by the Micromeritics s st any gases that will be available for connection during inst	•	)-



### **COMPUTER SYSTEM CHECKLIST**

Computer System		
Was the computer purchased from Micromeritics?	Υ	N
If <b>No</b> , does the computer meet Micromeritics' minimum requirements?	Υ	N
Will the computer be connected to the local network?	Υ	N
If <b>Yes</b> , will two Ethernet ports be available during the installation?	Y	N
Will there be more than one Micromeritics Ethernet based analyzers connected to this computer?	Y	N
If <b>Yes</b> , will an Ethernet switch be available during the installation?	Υ	N
All application users are required to have read/write permission to all directories and subdirectories where the application is installed. Will these permissions be set prior to installation?	Υ	N
Will the Micromeritics Service Engineer have Administrator rights to the computer?	Y	N
If <b>No</b> , will an IT representative be available?	Y	N
For MicroActive Share only:  Does the computer have a continuous internet connection to connect to the Share servers?	Y	N

### LABORATORY EQUIPMENT AND SUPPLIES CHECKLIST

Laboratory Equipment and Supplies		
Are sufficient quantities of liquid nitrogen available?	Y	N
Are sufficient quantities of isopropyl alcohol available?	Υ	N
Is a balance available for weighing samples?	Υ	N
Is a drying oven or sample degasser available?	Y	N



### **APPLICATION RELATED ISSUES CHECKLIST**

Application Related Issues		
What types of samples will be tested?		
Will these samples require pretreatment?	Y	N
Will any application assistance from Micromeritics Particle Testing Authority be required?	Y	N

#### PERSONNEL SECURITY CLEARANCE CHECKLIST

Security Clearance		
Are there any special arrangements required concerning security clearance?	Y	N
If <b>Yes</b> , please explain:		



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# 4 Pre-installation Instructions — 21CFR11 Environments

Use the *Users and Groups Worksheet on page 5 - 3* to log user names and assigned groups.

The Confirm application uses Windows Users and Groups to control access to the Micromeritics Confirm application. When the Micromeritics Confirm application is installed, two Confirm groups are created. Confirm users must be assigned to only one group.

If the computer will be connected to a LAN, the network/Windows administrator must be available to install the network connection. Also, if the analyzer files need to be accessible to a LIMS, file location will need to be discussed during installation.

Confirm User Name	Description
mic_confirm_user	mic_confirm_user is the user name used by all installations.
	This user should have complete control over the installation directory.
	The application is launched under this user name and has this user's privileges to the windows file system.
	This user should not be used by anyone or any other software that is not a Micromeritics application.
	The system administrator has the option of modifying this account so that the password never expires. Alternatively, if the password does expire while the application is running, the application automatically changes the password for this account.

Confirm Group Name	Description
Developer Group	<ul> <li>The default Developer group name is mic_[analyzer model number]_developer. Members of the Developer group:</li> <li>have rights to all functions of the Micromeritics application - including Advanced option presentation which allows the creation and modification of methods, sample files, and parameter files.</li> <li>can run an analysis.</li> <li>can also be assigned Administrator rights which control the user profiles.</li> </ul>
Analyst Group	The default Analyst group name is mic_[analyzer model number]_analyst. Members of the Analyst group:



Confirm Group Name	Description
	<ul> <li>have access to the Basic presentation option only.</li> <li>may create sample files from pre-defined methods and can modify only a limited number of input fields.</li> </ul>

#### **User Permissions within the Application**

Function	Developer	Analyst
Create methods	✓	
Create or modify sample files and parameter files	✓	
Create or modify sample files and parameter files only from the available method and parameter file		<b>✓</b>
Run analyses	✓	✓
Generate reports	✓	✓
List and print sample files	✓	✓
Perform routine maintenance	✓	✓
Enable manual control	✓	✓
Change limited analysis conditions prior to performing an analysis	✓	✓
Change report options after analysis	✓	✓
Access to the Advanced option presentation	✓	
Access to the Basic option presentation	✓	✓
Access to directories outside of the installation directory and data directory	<b>√</b> *	<b>√</b> *
Can overwrite, rename, or delete existing files in the data directory	<b>√</b> *	<b>√</b> *
Can perform diagnostics	✓	<b>✓</b>
Can perform calibration	✓	<b>✓</b>
Can view and print the system audit trail	✓	✓
Can manage libraries	✓	✓
Can change system units and gas selections	✓	<b>✓</b>
Browse outside of the Confirm installation location	✓	
Can add log entries	✓	<b>√</b> *

<sup>\*</sup> With administrative privileges only.



# 5 Pre-installation Checklist — 21CFR11 Environments

For each question, circle **Yes** if the condition applies to your laboratory or **No** if it does not. When this *Pre-installation Checklist* has been completed, see <u>Dates and Signatures on page 6 - 1</u>. Sign and date the form, then send it to Micromeritics.

### PERSONNEL REQUIREMENTS

Network Administrator		
Name:		
Will the computer be connected to a LAN? If <b>Yes</b> , does the network administrator have the ability to:		N
connect the computer to the network?		N
to correct network connection problems?		N
to set necessary network drive and directory access?		N
Will the analyzer need to be accessible to a laboratory information application? If <b>Yes</b> :		N
does the application administrator have the necessary file permissions?	Y	N
will the network administrator be available during installation?		N

Confirm Administrator		
Name:		
Will the Confirm Administrator:		
Have administrative privileges?     Y		N
Have a basic understanding of Windows groups and Windows users?		N
Be available during installation?	Y	N



Software User		
Name:		
Will the software user:		
have the ability to create and manage Windows users and groups?     Y  N		N
have Windows Administrator access?     Y		N
be available the first and last day of installation?	Y	N

### **USER INFORMATION REQUIREMENTS**

Function		
Has the <u>Users and Groups Worksheet on the facing page</u> been completed?	Y	N



# USERS AND GROUPS WORKSHEET

Micromeritics Confirm ap	pplication:	Developer	Analyst
User Name			



# **Blank Page**



#### 6 DATES AND SIGNATURES



All checklists and this completed form should be returned only if Micromeritics will be performing this installation.

#### PROJECTED INSTALLATION DATE

This is not a commitment for a specific installation date. After reading the site preparation requirements in this document, enter a date your site will be prepared and a preferred date for installation. After returning the checklist and signed form to Micromeritics, your Micromeritics representative will contact you to confirm an installation date.

When would installation be most convenient? Date: \_\_\_\_\_/\_\_\_/

#### COMMITMENT STATEMENT AND SIGNATURE FORM

I have read this document and understand my responsibilities regarding preparations for the installation of our analysis system. I believe this site is ready for the system to be installed.

Signature:		Date:
Name (Printed):		
Title (Printed):		
Company:		
City / State / Zip:		
Phone Number:		Fax Number:
E-mail:		
Analyzer:	Model:	Serial No.:
Is the Customer Repres	entative also the F	End User? Yes No

#### RETURN THE COMPLETED CHECKLIST AND FORMS TO:

Micromeritics Instrument Corporation ATTN: Service Operations Manager 4356 Communications Drive Norcross, GA / USA / 30093-2901

Email: Service.Helpdesk@Micromeritics.com

Fax: 1-770-662-3604