

MICROMERITICS

**Preinstallation Checklist and Instructions
for the ASAP 2020**

These Preinstallation Checklist and Instructions were reviewed and approved by:

Director, Quality Assurance

Marketing

Service Manager

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MFP/mfp



ASAP 2020

Accelerated Surface Area and Porosimetry System

Preinstallation Instructions and Checklist

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Overview

This document describes how to prepare your site for installation of the ASAP 2020 system. It contains instructions for both ASAP 2020 standard systems and ASAP 2020 **confirm** systems.

The document is organized into two parts: *ASAP 2020 Preinstallation Instructions* and *ASAP 2020 Preinstallation Checklist*. Each part contains two sections: 1.) *All ASAP 2020 Systems* and 2.) *ASAP 2020 confirm Systems Only*. Follow the instructions and complete the checklist in Section 1 if you purchased a standard or a **confirm** system. If you purchased a **confirm** system, follow the instructions and complete the checklist in section 2 also.

The *ASAP 2020 Preinstallation Instructions* contain information that will help you analyze your site and answer the questions in the checklist.

The *ASAP 2020 Preinstallation Checklist* contains questions about your laboratory environment, equipment and supplies, and instrument location. For each question, check **Yes** if the condition applies to your laboratory or **No** if it does not.

Conventions

Symbols

This document uses the symbols shown below to identify notes of importance, cautions, and warnings.



Notes contain a tip or important information pertinent to the subject matter.



Cautions contain information to help you prevent actions which could damage the instrument.



Warnings contain information to help you prevent actions which could cause personal injury.

ASAP 2020 Preinstallation Instructions

Section 1. All ASAP 2020 Systems

Environment

Instrument Space

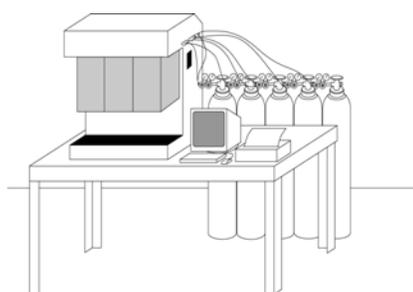
The ASAP 2020 is designed to be installed on a lab or table top surface. The ASAP 2020 is 33 in. (83.6 cm) wide, 24 in. (60.9 cm) deep and 39 in. (99.1 cm) high. Provisions must be made for placement of the peripherals also. The unit weighs up to 250 lbs (115 kg) depending on installed options.



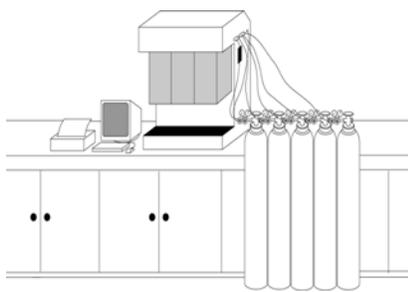
Prior to installation, careful consideration should be given to the area in your lab where the ASAP 2020 and its associated components will be located.

In order to determine the space requirements for your lab, we have included three typical instrument configurations in this section:

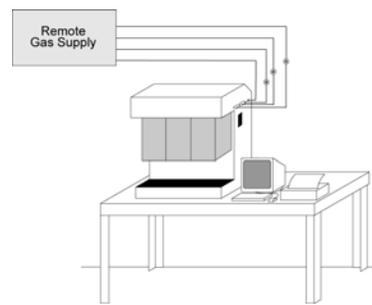
- A: Installation on a table top with access to front and back
- B: Installation on a cabinet against a wall
- C: Nonstandard installation



Configuration A



Configuration B



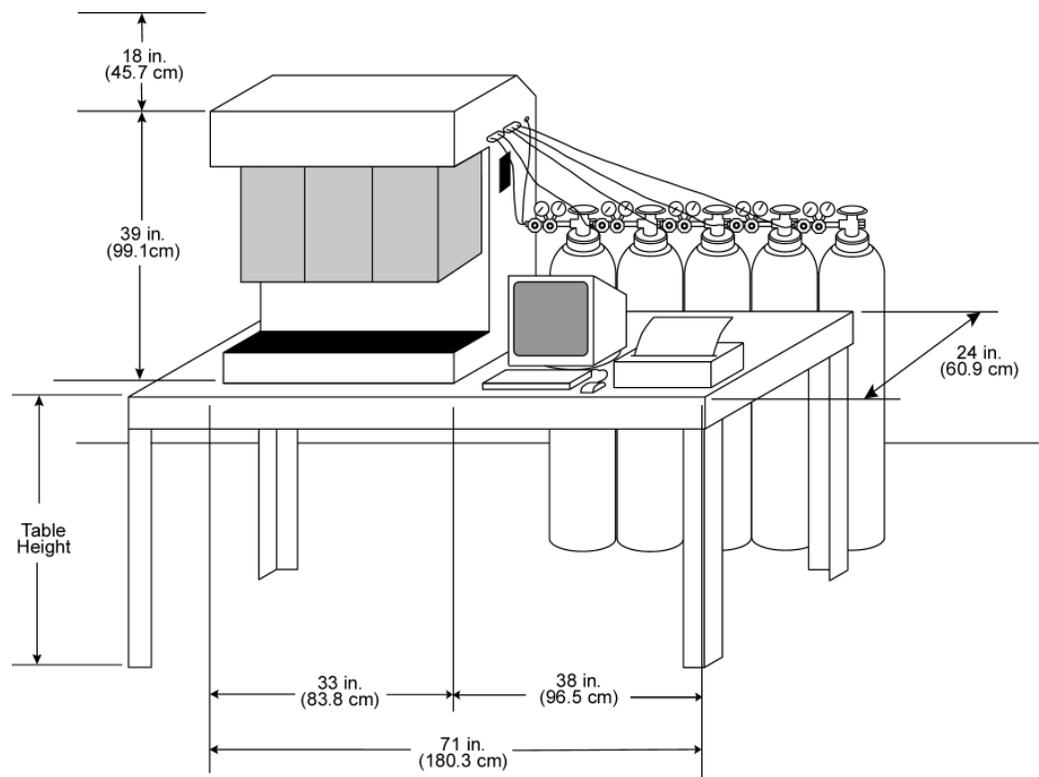
Configuration C

The instructions on the following pages provide information unique to each configuration. Please review the three configurations and select the one that best describes your laboratory accommodations. Enter the selected configuration in the Preinstallation Checklist and answer each question on the Checklist associated with that configuration.

Instrument Configuration

A. Installation on a Table Top with Access to Front and Back

Micromeritics considers a table top installation (shown below) where the front and rear of the instrument are open and easily accessible, and with the gas bottles placed behind the analyzer, to be the preferred choice. In this configuration, a greater amount of floor space is provided in front of the analyzer for routine tasks associated with sample preparation and analysis. Other benefits associated with this choice include easier operation, and greater access to the top and rear of the analyzer for routine maintenance.



The lab table must accommodate the instrument and computer's combined width of 71 inches (180.3 cm) and depth of 24 inches (60.9 cm).

The height of the ASAP 2020 is 39 inches (99.1 cm). In addition, 18 inches (45.7 cm) should be provided above the instrument for access to the top of the instrument, making it easier to do periodic maintenance and service. Inspect the area above the combined heights of the analyzer and table to ensure the absence of lab cabinets, air ducts, pipe, light fixtures, etc.

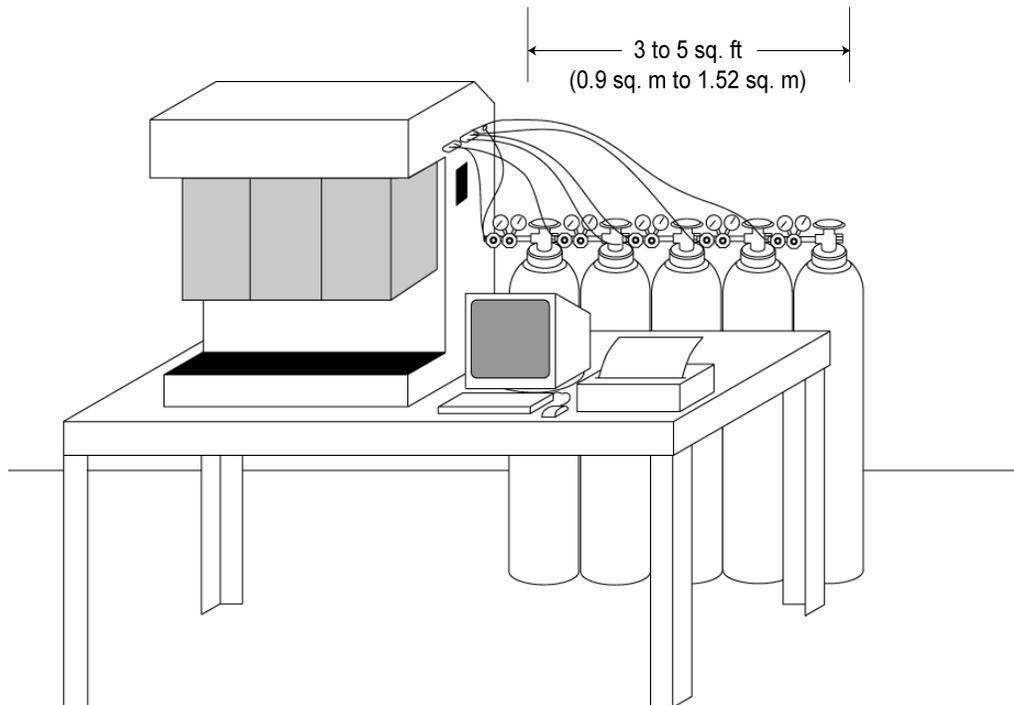
Gas Bottle Space

The lab must accommodate 1 square foot (0.30 square meters) for each gas bottle needed for installation and for any additional gas bottles needed after installation. For example:

- If three gases are used for physisorption, the space requirement is 3 square feet (0.9 square meters) to the rear of the instrument.
- If two gases are used for physisorption and three for chemisorption, the space requirement is 5 square feet (1.52 square meters) to the rear of the instrument.

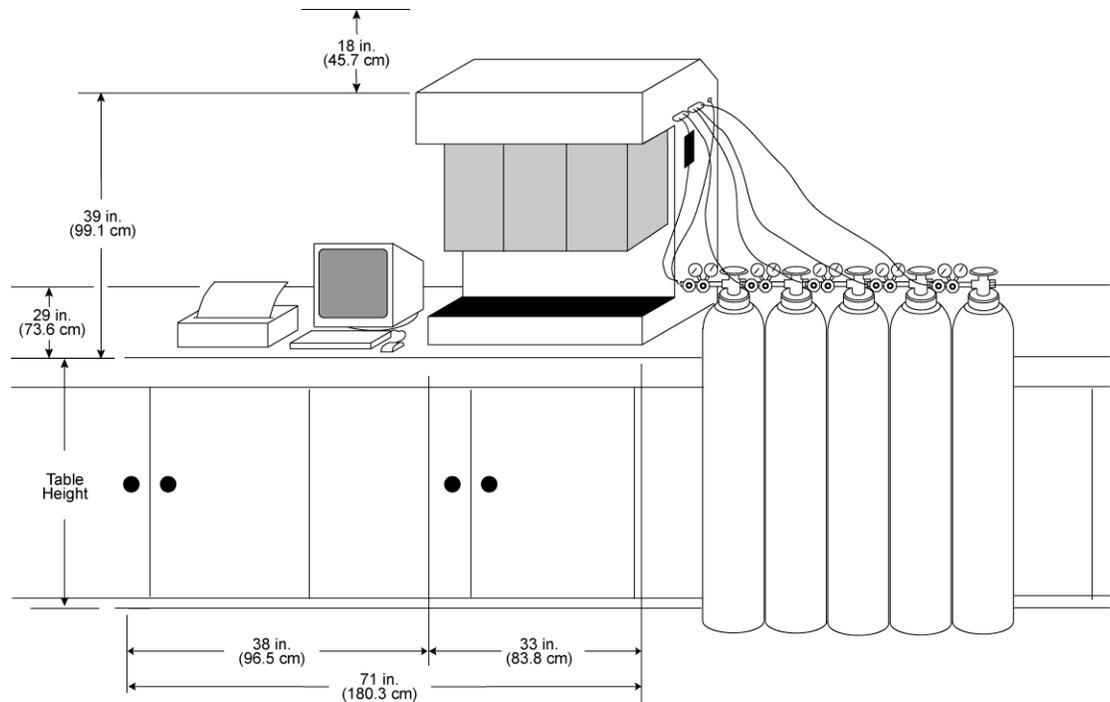
There may be a greater requirement for space if more gas bottles are needed. The analyzer can contain up to 12 gas inlets (6 for physisorption and 6 for chemisorption).

The bottles must be within 6 feet (1.83 m) of the right side of the instrument.



B. Installation on Cabinet Against a Wall

Another choice for locating the instrument and its associated components is shown below.



Installation on a cabinet or lab table that is against a wall is less optimal and necessitates the placement of the gas bottles to the right front of the analyzer. The computer and printer will most likely be installed on the left side of the analyzer. More lab space may be used because access to the table space behind the gas bottles may be impeded.

The lab table area must accommodate the instrument and computer's combined width of 71 inches (180.3 cm.).



See also "Gas Bottle Space" on page 6.

The height of the ASAP 2020 is 39 inches (99.1 cm). In addition, 18 inches (45.7 cm) should be provided above the instrument for access to the top of the instrument, making it easier to do periodic maintenance and service. Inspect the area above the combined heights of the analyzer and table to ensure the absence of lab cabinets, air ducts, pipe, light fixtures, etc.

The depth of the instrument is 24 inches (60.9 cm). Because the instrument is not accessible from both sides, an additional 5 inches (12.7 cm) is needed behind the instrument to provide for electrical connections, making the total depth requirement 29 inches (73.6 cm).

Given the instrument's overall width, it would be advisable to provide as much as 40 inches (101.6 cm) of depth in order to access the rear of the instrument for periodic maintenance and service.

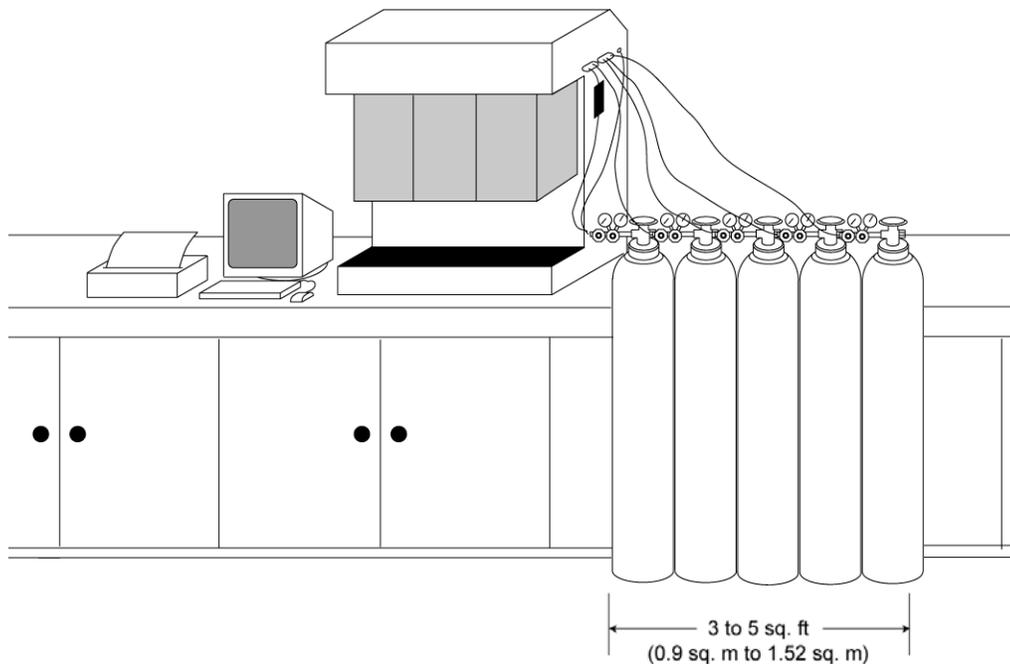
Gas Bottle Space

The lab must accommodate 1 square foot (0.30 square meters) for each gas bottle needed for installation and for any additional gas bottles needed after installation. For example:

- If three gases are used for physisorption, the space requirement is 3 square feet (0.9 square meters) to the right of the instrument.
- If two gases are used for physisorption and three for chemisorption, the space requirement is 5 square feet (1.52 square meters) to the right of the instrument.

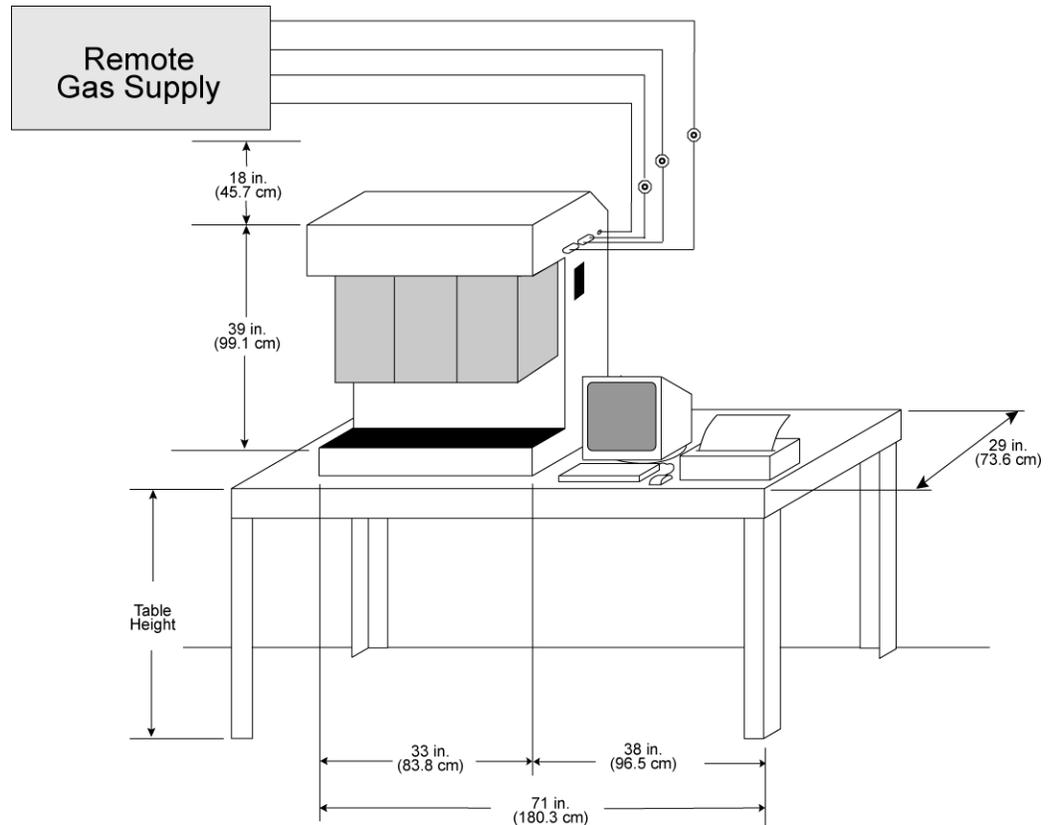
There may be a greater requirement for space if more gas bottles are needed. The analyzer can contain up to 12 gas inlets (6 for physisorption and 6 for chemisorption).

The bottles must be within 6 feet (1.83 m) of the right side of the instrument.



C. Nonstandard Installations

Standard installation, included in the purchase of the instrument, requires the use of 1/8-in. (0.3175-cm) copper gas supply lines, which are in the instrument accessories.



The additional costs associated with the non-standard issues are not covered under the standard installation provided with the instrument purchase.

A nonstandard installation will be created if another gas supply line is used or if the gas bottles cannot be placed within 6 feet (1.83 m) of the analyzer.

There will be additional costs associated with a nonstandard installation.

Please contact the Service Manager to discuss a nonstandard installation.

Other Environmental Factors

Power

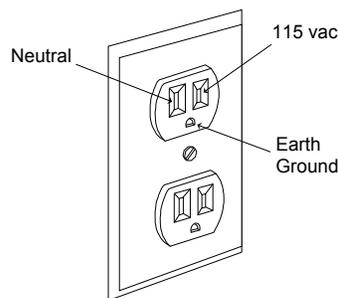
The ASAP Model 2020 is designed to operate with 100, 115, or 230 VAC \pm 10% at 50 or 60 Hz. The instrument is shipped from the factory set for 115 VAC. Noise-free power of the correct voltage and frequency, with a safety earth ground, should be available through a standard wall receptacle. The power outlet should be able to supply 15 amps.

Two additional outlets are needed for the analysis and degas (if degas option is installed) vacuum pumps. There should also be sufficient outlets for the computer, monitor, printer and any other peripheral devices.

These requirements can be checked by using a *Circuit Analyzer* (available at most hardware or electronic supply houses) or a multimeter. The preferred method uses the circuit analyzer. This device plugs directly into the wall receptacle and gives a visual or audible indication of the status of the receptacle. There are six different possibilities of wiring at the receptacle. They are as follows:

Open ground	Open neutral	Open hot	Hot and ground reversal	Hot and neutral reversal	Correct wiring
Fault	Fault	Fault	Fault	Fault	OK

The only wiring configuration acceptable for proper instrument operation is the block labeled **OK**, indicating correct wiring. If this condition cannot be met, contact the Electrical Department at your facility to remedy the wiring problem.



DO:

- Install the instrument on its own, dedicated power line.

DO NOT:

- Place other devices on the same power line; for example, motors, generators, or ovens.

Storage Space

Cabinet space should be made available for the storage of accessories and spare parts.

Temperature and Humidity

Temperature and humidity must be controlled to within the following: 10 to 30°C and 20% to 80% relative, non-condensing humidity. Office buildings are typically held within these limits.

DO NOT:

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

Ventilation

The area reserved for installation of the ASAP 2020 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.

Hazards & 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 safety measures necessary for Micromeritics' employees to enter and install the ASAP 2020 at your facility.

Instrument and Accessories

Computer System

We recommend that you purchase the computer to be used with the ASAP 2020 Analyzer from Micromeritics. We thoroughly test Microsoft Windows[®] operating systems with our application and offer technical support and maintenance for the computers we provide.

If you are supplying your own computer, it must meet the following *minimum* requirements:

- Pentium 333 MHz computer (or equivalent)
- One CD ROM drive
- 128 megabytes of main memory
- 1-gigabyte hard disk space
- SVGA monitor (800 x 600 minimum resolution)
- Windows 2000 or Windows XP Professional
- One RS232 serial port for each attached instrument and each major accessory requiring an RS232 connection
- Mouse
- Printer that is IBM Graphics or Epson LQ compatible
- UPS for computer (optional)



The chances that computer problems will occur during installation are greatly reduced if you purchased your computer system from Micromeritics.



Micromeritics supports the computer system it sells.



If you did not purchase a computer system from Micromeritics for your instrument but wish to do so now, contact your local Micromeritics Sales Representative.

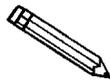
Potential Computer Problems

Micromeritics software has been tested on a wide variety of different computers and Microsoft Windows and XP Professional operating systems. Micromeritics does not recommend, nor support, the use of a Windows or Windows NT based operating system other than Windows 2000 or XP Professional.

Computers not purchased from Micromeritics, which meet the requirements listed above, may still not function properly due to peripheral components (such as network cards, modems, or sound cards), which interfere with communications between the instrument and the computer.

If you did not purchase your computer from Micromeritics:

- Our service representative may install and test the instrument using a Micromeritics computer.
- Our service representative will attempt to connect your computer after installation and testing are complete. If your computer does not function properly, our service representative will not troubleshoot the computer. It is your obligation to ensure that your computer system is configured and working properly for ASAP 2020 installation.



The labor and expense costs associated with delays traceable to a computer system not purchased from Micromeritics are not part of a standard installation. You will be invoiced for these costs after the installation is completed.



Micromeritics provides support for the connection of a computer to a company network or LIMMS for ASAP 2020 *confirm* systems only.



Peripheral components included in many computer systems, (such as network cards, modems, sound cards) can frequently interfere with communications between the instrument and the computer. Micromeritics does not support or troubleshoot peripheral components that are not needed to communicate between the instrument and the computer.

Instrument and Accessories Verification

Using the packing list shipped with instrument, verify that all products, accessory items, options, software, and documentation are received intact and in the correct quantity.

Shipping Damage

Report any apparent shipping damage or any shortages first to the Carrier and then to Micromeritics. Insurance claims **MUST** be made with the Carrier, **NOT** Micromeritics.

DO:

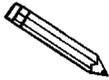
- Keep all software, books, and manuals with the instrument.
- Keep all boxes and shipping containers until the installation is complete.
- Report any shipping damage immediately to the carrier and follow their directions.
- Report missing or wrong parts to Micromeritics, in addition to any shipping damage, only after filing a claim with the Carrier.

DO NOT:

- Ask Micromeritics to file a claim for shipping damages.
- Throw out shipping boxes and containers.

Instrument Placement

The instrument must be unpacked and moved to a table or cabinet top prior to installation.



The customer, not Micromeritics, is responsible for unpacking and moving the analyzer to its location in the lab.

The ASAP 2020 analyzer weighs up to 250 lbs (115 kg) and requires three to four people to lift it from its shipping carton. Two persons should not attempt to lift the analyzer.



Two persons should not attempt to move the analyzer. Use proper lifting techniques to avoid injury.

Gas Supply

Gas Supply Lines

See “Instrument Test Options” on page 17 for the analytical gasses needed during installation.

Standard installation requires the use of 1/8-in. (0.3175-cm) copper gas supply lines, which are shipped with the instrument.

DO:

- Use the 1/8-in. (0.3175-cm) x 6-ft (1.83-m) copper gas lines supplied in the instrument accessories kit. Stainless steel gas lines are available from Micromeritics for use with gases that are not compatible with copper.



Longer lengths of gas supply lines will cause serious problems during installation. Gas lines not supplied by Micromeritics CANNOT be installed by Micromeritics Service Personnel.

- Ensure purity of gases.

DO NOT:

- Use gas bottles with less than 200 psig (1378.9 kPag) pressure.
- Use any other gas lines to connect the gas supply to the instrument.
- Use gas purifiers.



Gas supply lines that are made of materials other than copper or stainless steel will cause serious problems during installation or operation.



Gas purifiers frequently cause serious problems during installation.

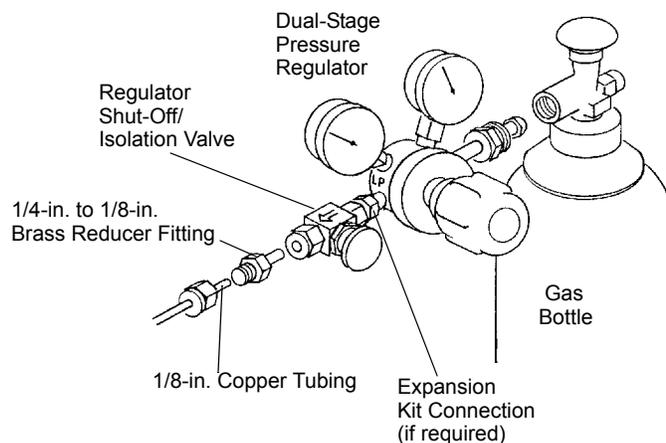
Gas Supply Hardware

Micromeritics specifies only dual-stage regulators for use with its products. Most Micromeritics instruments consume a small quantity of gas during each analysis cycle, after which gas flow through the regulator stops. In this static condition, the outlet pressure of the gas regulator is expected to remain stable until the instrument requires more gas.

Micromeritics instruments operate best when the inlet gas pressure is maintained relatively constant; otherwise, overpressure conditions may cause leaks, overshooting of target pressures, long analysis times, or wasted gas.

Most available single-stage regulators are only designed to deliver a steady output pressure while delivering a constant, flowing stream of gas. It is very difficult for single-stage regulators to hold a steady output pressure with little or no gas flowing through them.

Under the same operating conditions, dual-stage regulators are better able to maintain a pressure setting, thus providing precise control of the pressure during analysis while the gas in the bottle is being consumed.



We recommend that you purchase the gas regulators to be used with the ASAP 2020 Analyzer from Micromeritics. The dual-stage regulators Micromeritics provides have been carefully evaluated and tested to provide superior performance.

If you choose to use regulators from a source other than Micromeritics, please keep in mind that many commercially available gas regulators lack key features, which are required for precise surface area and pore volume instruments. These four 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 instrument 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 instrument is idle

for an extended period of time, such as 8 to 10 hours, this same stability of gas delivery pressures should be achieved.

- **Range of Pressure.** The regulator output must operate from 0 to 30 psig (206.8 kPag).
- **Suitable Subassemblies.** The regulator must have a shut-off or outlet isolation valve compatible with 1/8-in. (0.3175-cm) or 1/4-in. (0.6-cm) Swagelock compression fittings.



Improperly selected regulators will cause costly delays during the installation process, resulting in additional costs and wasted time.



If you did not purchase regulators from Micromeritics for your instrument but wish to do so now, contact your local Micromeritics Sales Representative.

Regulator Expansion Kits

It is sometimes beneficial to attach more than one instrument, and/or accessory device, to a single gas supply.

It is also common to need the same gas for one analysis gas and the degas backfill gas. Any time this is done, it is critically important that there be a means of isolating, or shutting-off, each device that is attached to the gas supply regulator. Micromeritics recommends the use of a vacuum rated shut-off/isolation valve for this purpose.

This shut-off/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 you anticipate the need to attach more than one instrument and/or accessory device to the gas supply, you must acquire one or more of the following regulator expansion kits..

004/33601/00 – Regulator Expansion Kit (2-outlet) – This kit contains one “T fitting,” two vacuum rated shut-off valves, and other necessary hardware.

For example, this expansion kit allows you to provide gas to two instruments, or one instrument and one accessory device, or one analysis inlet and the degas inlet.

004/33601/01 - Regulator Expansion Kit (3-outlet) - This kit contains one “Cross fitting,” three vacuum rated shut-off valves, and other necessary hardware.

For example, this expansion kit allows you to provide gas to three instruments, or two instruments and one accessory device, or one analysis inlet and the degas inlet.

Laboratory Equipment and Supplies

Liquid Nitrogen

Ensure liquid nitrogen is available in sufficient quantities. There should be at least 10 liters, enough for two working dewars at 3 liters each, as a minimum requirement for starting an analysis.

DO:

- Ensure an adequate supply of liquid nitrogen.

DO NOT:

- Use liquid nitrogen which is bluish (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 weight of the sample must be known. This requires an analytical balance with the capacity of 100 grams measurement and 1 mg readability.

In order to obtain accurate analysis results, the glassware (sample tube, filler rod, etc.) must be clean. The following items are suggested for cleaning glassware:

- Sink
- Small plastic tub for detergent solution
- Alconox or similar laboratory detergent
- Drying oven
- Ultrasonic bath
- Acetone or Isopropyl Alcohol
- Fume hood
- Clean, dry compressed air or dry nitrogen

For chemisorption units only, a separate supply of dry, clean, oil-free house/compressed air should be available to attach to the side of the instrument for furnace cooling.

Equipment Accessories

It would be helpful to know if you purchased any of the following:

- Chiller dewar option for Micropore units
- Coolant (Methanol, 3 gals.) for Chiller Option
- Vapor Adsorption Accessory

If so, please indicate on page 30 of the Pre-installation Checklist.

Application Related Issues

In order to ensure a thorough installation, it will be helpful for Micromeritics to know which types of samples you will be testing. If possible, please list those types on page 30 of the Checklist.

Please advise us if your samples require any pretreatment.

If required, do you have the proper equipment, such as a vacuum oven or furnace, to pretreat your samples?

Micromeritics offers application assistance through our Materials Analysis Lab.

Instrument Test Options

In order to verify proper instrument function and train your instrument operators, Micromeritics representatives may choose to analyze one or more of the reference materials provided in the instrument accessories.

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



Micromeritics representatives are trained to use these same reference materials when troubleshooting future problems. Deciding to acquire the analytical gases needed to support this capability is a smart decision.

Please indicate on page 31 of the Checklist which gases you intend to provide during installation.

Instrument Type	Analysis Type	Required Gases	Regulator Fitting	Required Purity
All Types These two gases are required for all installations.	Nitrogen Surface Area	N ₂	(CGA 580)	99.999%
		He	(CGA 580)	99.999%
Krypton/ Multigas Units Additional gas needed for this analysis.	Krypton Surface Area	Kr	(CGA 580)	99.995%
MicroPore Units Choose at least one of these additional gases.	N ₂ Micropore Distribution Ar Micropore Distribution CO ₂ Micropore Distribution	N ₂	(CGA 580)	99.999%
		Ar	(CGA 580)	99.999%
		CO ₂	(CGA 580)	99.995%
Chemisorption Units Both of these additional gases are required for chemisorption.	Chemisorption	H ₂ CO	(CGA 350) (CGA 350)	99.999% 99.990%

Personnel Security Clearance

If security clearances, insurance certificates, or any other special arrangements are required for Micromeritics employees to enter your facility, please explain in detail.

Please inform Micromeritics how much advance notice you require to obtain clearance.

Projected Install Date

After reading the site preparation requirements in this document, select a date by which your site will be prepared, and on which you would like to schedule installation. Enter the date on page 32 of the Checklist.

After you return the Checklist to Micromeritics, your Micromeritics representative will contact you to confirm an installation date.

Commitment Statement/Signature



Micromeritics is not responsible for delays in installation due to incorrect site preparations.

Read this document carefully. If you are unsure about any part of this document or the checklist, please contact the Micromeritics Service Department for clarification. When you understand your responsibilities regarding site preparations for the instrument and believe the site is ready for the installation, sign the Preinstallation Checklist, date it, and FAX it to Micromeritics as described below.



Return the Preinstallation Checklist only. It is not necessary to return this instruction set.

Thank you for your time, patience, and assistance in preparing for this installation.

Within the United States

FAX Checklist to: Service Operations Manager
(770) 662-3604

OR

Mail Checklist to: Micromeritics Corporation
One Micromeritics Drive
Norcross, Georgia 30093

Attn: Service Operations Manager

Outside the United States

Contact your local Micromeritics representative.

Section 2. ASAP 2020 *confirm* Systems Only

Personnel Requirements

The ASAP 2020 *confirm* Analysis System is comprised of:

- The ASAP 2020 Analyzer and accessories
- ASAP 2020 *confirm* system analysis and administrator utility software

The Administrator Utility software works in conjunction with Windows security to control access to the Micromeritics application. Windows security controls computer, directory, and file access. The Administrator Utility controls access to the Micromeritics application, and controls users' rights to perform tasks within the application.

The ASAP 2020 *confirm* system will be installed by a Micromeritics service representative, who will work with your laboratory personnel to ensure that the *confirm* application works in harmony with Windows to provide a secure, traceable, analysis system.

If the ASAP 2020 computer will be connected to a Local Area Network, your Network/Windows administrator must be available to install the network connection. Also, if the ASAP 2020 files need to be accessible to a laboratory information system, file location will need to be discussed during installation.

The following table lists the functions and related capabilities necessary for a successful ASAP 2020 system installation. The laboratory personnel responsible for each of these functions must be on-site and available during installation. After reviewing this table, complete the Personnel Requirements Checklist on page 33.

Function	Required Capability
Windows Administration	<p>Ability to create and manage Windows user groups.</p> <p>Ability to create and manage Windows users.</p> <p>Must have Windows Administrator access.</p> <p>Must be available the first and last day of installation.</p>
Network Administration	<p>Ability to connect computer to network.</p> <p>Ability to correct network connection problems.</p> <p>Ability to set necessary network drive and directory access.</p>
Micromeritics Application Administration	<p>Must have Windows Administrator access to all directories.</p> <p>Must have basic understanding of Windows Groups and Windows Users.</p>

The following table lists the procedures performed during installation and the personnel responsible for each procedure

Step	Description	Installer	Network/ Windows Administrator	Micromeritics Application Administrator
1	Install computer on network (if necessary)		✓	
2	Install Micromeritics application	✓	✓	
3	Discuss file location	✓	✓	
4	Test setup	✓	✓	
5	Run the Administrator Utility			✓
6	Define password configuration in Administrator Utility			✓
7	Define user profiles in Administrator Utility			✓
8	Start Micromeritics application	✓		

User Information Requirements

The Administrator Utility restricts access to the Micromeritics application by enabling the Micromeritics application administrator to assign one of these profiles to users:

Administrator Profile - enables the user to install and maintain the Micromeritics application and updates, and use the Administrator Utility to establish and control user access accounts. The Administrator is required to have administrative access to the Windows workstation.

Developer Profile - enables the user to develop and enter analysis methods. The Developer has access to all functions of the Micromeritics application.

Analyst Profile - enables the user to perform analyses using pre-defined analysis methods (referred to as *templates*). The Analyst has access to a limited set of the Micromeritics application features. Each user profile contains this information:

- User Name
- Full Name
- Password

- Password Change Date
- Access Level (Administrator, Developer, or Analyst)

The Micromeritics application users and their profiles must be determined prior to installation. The table below lists the Micromeritics application functions that can be performed by users with each profile. Use the worksheet on page 35 to record the users and their profiles.

Function	Administrator	Developer	Analyst
Install Micromeritics application updates	✓		
Control Micromeritics application access using the Administrator Utility	✓		
View and export the system log	✓		
Create sample records from templates		✓	✓
Analyze samples		✓	✓
Generate reports		✓	✓
List and print sample records and templates		✓	✓
Perform routine maintenance		✓	✓
Enable manual control when the instrument is idle (if applicable)		✓	✓
Change limited analysis conditions before performing an analysis		✓	✓
Change report options after an analysis		✓	✓
Create analysis methods (templates) for analyst use		✓	
Perform all other Micromeritics application functions		✓	

ASAP 2020 Preinstallation Checklist

Section 1. All ASAP 2020 Systems

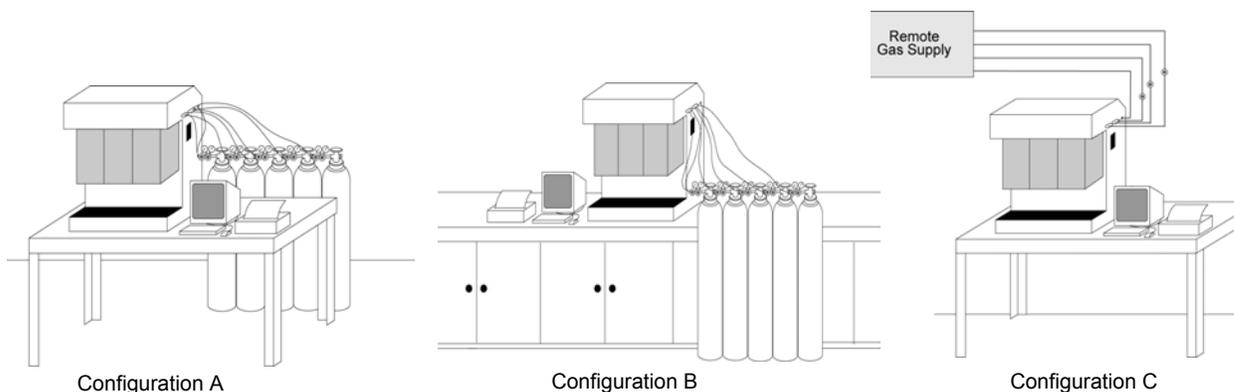
Environment

Instrument Space

The Preinstallation Instructions that accompany this Checklist provide important information on the space requirements for the ASAP 2020.

Please review “Environment” on page 2 and “Other Environmental Factors” on page 8 before proceeding. These sections provide the physical dimensions of the instrument and peripheral equipment, power requirements, and other site environmental factors.

After reviewing these sections, you should be prepared to select the configuration that best represents your laboratory. To aid you in making this decision, we have included three instrument configuration examples:



Micromeritics recommends *Configuration A* because it allows you access to the front and rear of the instrument, peripheral equipment, and gas supply lines. We have also included examples of laboratory conditions that do not allow this type of set up.

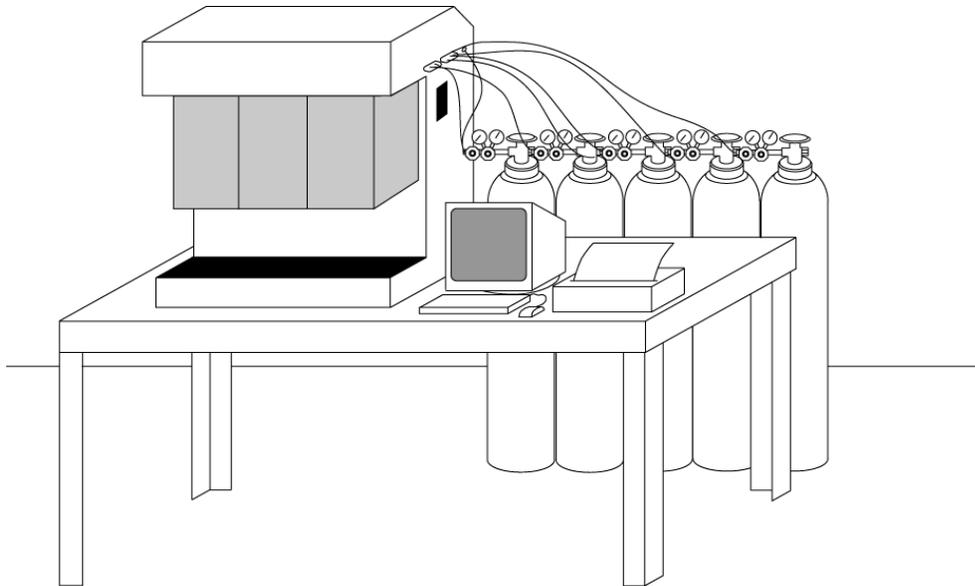
1. Refer to the pictures shown under *Instrument Configuration A, B, or C* on the following pages.
2. Please complete each question associated with the configuration that best represents your lab.

Instrument Configuration

A: Installation on a Table Top with Front and Back Access

This picture best represents the lab area where the instrument and associated components will be located.

(Initial)

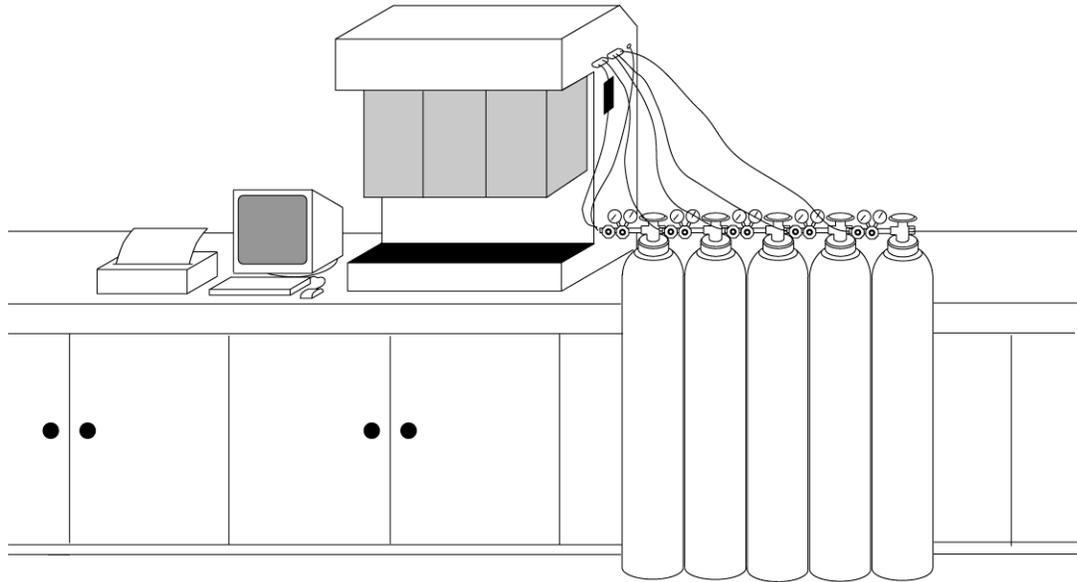


Configuration A Questions	Refer to page	Yes	No
Will the instrument be placed on a surface which allows access to the front and back?	3	___	___
Can the lab area where the instrument and computer will be placed accommodate the combined width of 71 inches (180.3 cm)?	3	___	___
Can the lab table accommodate the instrument depth requirement of 24 inches (60.9 cm)?	3	___	___
Are there any obstructions in the space above the combined heights of the table and analyzer?	3	___	___
Will gas supply bottles be available within 6 feet (1.8 m) of the right side of the instrument?	4	___	___
Can the lab accommodate 1 square foot (0.30 square meters) for each gas bottle needed after installation and any future gas bottles needed?	4	___	___

B: Installation on a Cabinet Against a Wall

This picture best represents the lab area where the instrument and associated components will be located.

(Initial)

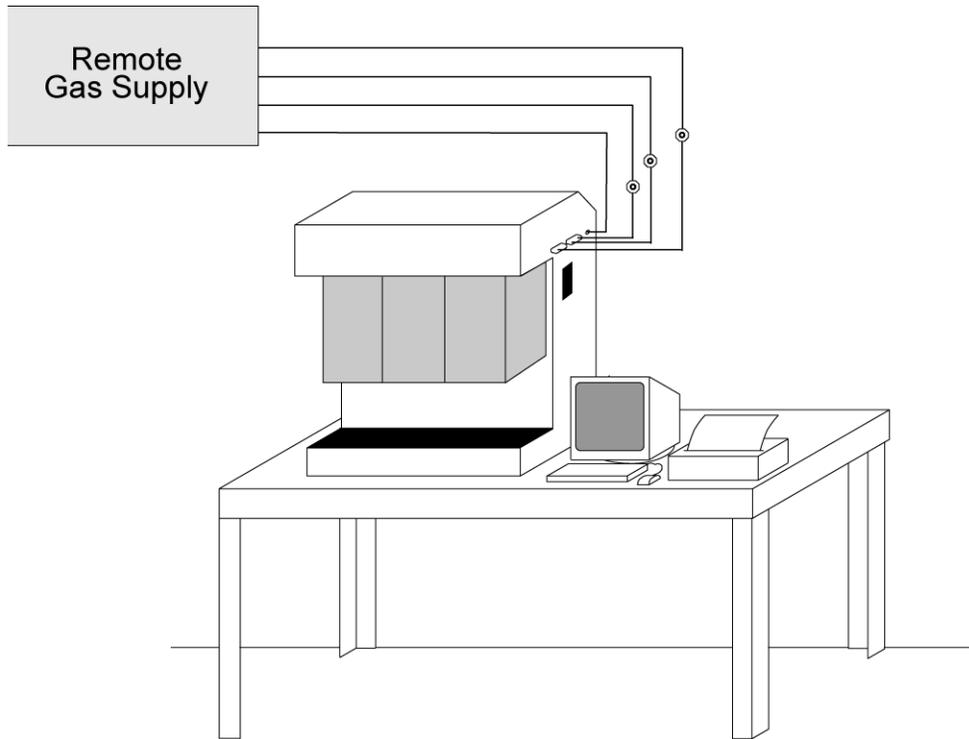


Configuration B Questions	Refer to page	Yes	No
Will the instrument be placed on a table or cabinet-like surface that is against a wall and does not allow access to the back of the instrument?	5	___	___
Can the lab area where the instrument and computer will be placed accommodate the combined width of 71 inches (180.3 cm)?	5	___	___
Can the lab area accommodate the instrument depth requirement of 29 inches (73.6 cm)?	5	___	___
Can the lab area accommodate any additional depth?	5	___	___
Are there any obstructions in the space above the combined heights of the table and the analyzer?	5	___	___
Will gas supply bottles be available within 6 feet (1.8 m) of the right front of the instrument?	6	___	___
Can the lab accommodate 1 square foot (0.30 square meters) for each gas bottle needed after installation and any future gas bottles needed?	6	___	___

C: Nonstandard Installations

This picture best represents the lab area where the instrument and associated components will be located.

(Initial)



The additional costs associated with the nonstandard issues are not covered under the standard installation provided with the instrument purchase.

Configuration C Questions	Refer to page	Yes	No
Will the instrument be placed on a table or surface that allows access to the back of the instrument?	7	—	—
If a nonstandard gas supply system will be used, will the gas supply bottles be available in front of the instrument? If No , please indicate the approximate distance to gas supply bottles. _____	7	—	—
Can the lab area accommodate the combined instrument and computer width of 71 inches (180.3 cm)?	7	—	—

Configuration C Questions (continued)	Refer to page	Yes	No
Can the lab area accommodate the instrument depth requirement of 29 inches (73.6 cm)?	7	___	___
Can the lab area accommodate any additional depth?	7	___	___
Are there any obstructions in the space above the combined heights of the table and analyzer?	7	___	___
Can the lab area accommodate the future space requirement of any gas bottles needed after installation?	7	___	___
Are there plans to install the computer to a network in the lab?	7	___	___
Are there other potential nonstandard issues to discuss? If Yes , please describe:	7	___	___

I have spoken with the Micromeritics Service Manager regarding the specifics of the nonstandard issues listed above.

The name of the Manager with whom I spoke is _____.

I understand that the additional costs associated with the nonstandard issues listed above are not covered under the standard installation provided with the instrument purchase. _____ (Initial)

Other Environmental Factors

Environmental Factor	Refer to page	Yes	No
Is power installed with correct voltage and frequency, and a safety earth ground?	8	___	___
Is storage space available for the accessories?	9	___	___
Are temperature and humidity controlled within recommended specifications?	9	___	___
Is the area reserved for installation well ventilated?	9	___	___
Are hazards present or precautions necessary in area of installation? If Yes , please explain _____ _____ _____	9	___	___
Are safety measures required? If Yes , please explain _____ _____	9	___	___

Instrument and Accessories

Instrument and Accessories	Refer to page	Yes	No
Was the computer purchased from Micromeritics?	10	___	___
If NO , does the computer meet Micromeritics' minimum requirements?	10	___	___
Is the computer equipped with the number of RS232 serial ports required for connection of the analyzer and each accessory that requires an RS232 connection?	10	___	___
Are all products, options, and quantities ordered present and undamaged?	11	___	___
Has any apparent shipping damage been reported to the Carrier and has Micromeritics been notified?	11	___	___

Instrument Placement

Instrument Placement	Refer to page	Yes	No
Can the analyzer be placed on the work area (table or cabinet top) in the lab by your personnel prior to installation?	12	___	___
Do you understand that the size and weight of the analyzer requires a minimum of 3 to 4 persons to lift it and place it on a lab surface?	12	___	___

Gas Supply

Item	Refer to page	Yes	No
Will the 1/8-in. (0.3175-cm) x 6-ft (1.83 m) copper gas lines supplied with the instrument be used for installation? If NO , what type of lines will be used? _____ _____	13	___	___
Were dual-stage gas regulators purchased from Micromeritics? If NO , do your dual-stage gas regulators meet Micromeritics' specifications?	14	___	___
Will installation of the instrument require one or more Regulator Expansion Kits? If YES , do you have the regulator expansion (kit)s available?	15	___	___

Laboratory Equipment and Supplies

Item	Refer to page	Yes	No
Is liquid nitrogen available in sufficient quantities	16	___	___
Do you have an analytical balance with the capacity of 100 grams measurement and 1 mg readability?	16	___	___
Do you have the following items suggested for cleaning glassware?	16		
• Drying oven		___	___
• Ultrasonic bath		___	___
• Acetone or Isopropyl Alcohol		___	___
• Fume hood		___	___
Is a vacuum oven available to pretreat samples (if required)?	16	___	___
For chemisorption units only: Is high-purity, house/compressed air available, regulated at pressures of approximately 20 psig?	16	___	___
Did you purchase the Chiller dewar option?	16	___	___
Do you have proper coolant (Methanol, 3 gals.)?	16	___	___
Did you purchase the Vapor Adsorption Accessory?	16	___	___
Do you have facilities to exhaust toxic gases?	16	___	___

Application Related Issues

Application Issue	Refer to page	Yes	No
What types of samples will you be testing? _____ _____	17		
Will these samples require pretreatment?	17	___	___
Will you require any application assistance from Micromeritics Materials Analysis Laboratory?	17	___	___

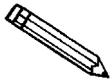
Instrument Test Options

Gas	Refer to page	Yes	No
<p>All Instrument Types: Required Gases These gases are required. The installation will not be scheduled until these gases are available:</p> <p>(CGA 580) N₂ 99.999% (CGA 580) He 99.999%</p>	17	—	—
<p>Optional Gases Please indicate which of these optional gases you intend to provide during installation:</p> <p>Krypton/MultiGas Units: (additional gas) (CGA 580) Kr 99.995%</p> <p>Micropore Units: (additional gases) Choose at least one of these additional gases: (CGA 580) N₂ 99.999% (CGA 580) Ar 99.999% (CGA 580) CO₂ 99.995%</p> <p>Chemisorption Units: (additional gases) Both of these gases are needed for chemisorption analysis: (CGA 350) H₂ 99.999% (CGA 350) CO 99.990%</p>	17	—	—

Personnel Security Clearance

Security Clearance	Refer to page	Yes	No
<p>Are there any special arrangements required concerning security clearance? If Yes, please explain in detail _____ _____ _____</p>	18	—	—

Projected Install Date



For *confirm* systems only: complete Section 2, beginning on the next page, before determining the projected install date.

When would installation be most convenient?
(This is not a commitment for a specific installation date.)

Date: ____ / ____ / ____

Commitment Statement/Signature



For *confirm* systems only: complete Section 2, beginning on the next page, before signing this commitment statement.

I have read this document and understand my responsibilities regarding preparations for the installation of our instrumentation. I believe this site to be ready for the ASAP 2020 Analyzer to be installed.

SIGNATURE: _____

NAME (Printed): _____

TITLE (Printed): _____

COMPANY: _____

CITY, STATE and ZIP: _____

PHONE NUMBER: _____

DATE: _____

INSTRUMENT MODEL _____ SERIAL NUMBER _____

Section 2. ASAP 2020 *confirm* Systems Only

Complete this section **only** if you purchased an ASAP 2020 *confirm* System. After completing this section, enter the projected installation date and complete the commitment statement on the previous page.

Personnel Requirements

In order to install and operate the ASAP 2020 *confirm* Analysis System, the laboratory personnel responsible for the functions listed below must be identified and available during the installation process.

Function	Person Responsible	Refer to page	Yes	No
<p>Windows Administration</p> <p>Does the administrator have the ability to create and manage Windows user groups?</p> <p>Does the administrator have the ability to create and manage Windows users?</p> <p>Does the administrator have Windows Administrator access?</p> <p>Will the Windows administrator be available the first and last day of installation?</p>	_____	20	___	___
<p>Network Administration</p> <p>Will the ASAP 2020 computer be connected to a Local Area Network (LAN)?</p> <p>If yes:</p> <p>Does the administrator have the ability to connect the computer to the network?</p> <p>Does the administrator have the ability to correct network connection problems?</p> <p>Does the administrator have the ability to set necessary network drive and directory access?</p>	_____	20	___	___

Function	Person Responsible	Refer to page	Yes	No
Will ASAP 2020 files need to be accessible to a laboratory information application?			___	___
If yes: Does the administrator have the necessary file permissions?			___	___
Will the network administrator be available during installation?			___	___
Micromeritics Application Administration	_____	20		
Does the administrator have access to all directories?			___	___
Does the administrator have a basic understanding of Windows Groups and Windows Users?			___	___
Will the administrator be available during installation?			___	___

User Information Requirements

Function	Refer to page	Yes	No
Have the application users been entered in the Administrator Utility User Profiles Worksheet (located on the following page)?	21	___	___

Administrator Utility User Profiles Worksheet

Application User	Administrator	Developer	Analyst
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			

Application User	Administrator	Developer	Analyst
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			
Name: _____ Windows User ID: _____ Full Name: _____			