MICROMERITICS

Preinstallation Checklist and Instructions for the Saturn DigiSizer 5200

These Preinstallation Checklist and Instructions were reviewed and approved by:

Director, Quality Assurance

Marketing

Service Manager

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Revision History

REV	ECN #	DESCRIPTION OF CHANGE	CHK BY	DATE
-	040149	Formal release		

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Saturn DigiSizer® 5200

Preinstallation Checklist and Instructions

520-42870-01

Nov 2003

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AquaPrep is a trademark of Micromeritics Instrument Corporation.

Windows is a registered trademark of Microsoft Corporation.

Table of Contents

Overview

This document describes how to prepare your site for installation of the Saturn DigiSizer 5200 system. It contains instructions for both Saturn DigiSizer 5200 standard systems and Saturn DigiSizer 5200 ***confirm*** systems.

The document is organized into two parts: *Saturn DigiSizer 5200 Preinstallation Instructions* and *Saturn DigiSizer 5200 Preinstallation Checklist*. Each part contains two sections: 1.) *All Saturn DigiSizer 5200 Systems* and 2.) *Saturn DigiSizer 5200* ***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.

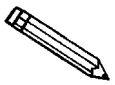
The *Saturn DigiSizer 5200 Preinstallation Instructions* contain information that will help you analyze your site and answer the questions in the checklist.

The *Saturn DigiSizer 5200 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.

When you have completed the checklist, fill in the Commitment Statement/Signature section, sign and date, and return the checklist to Micromeritics Service Center (see “Commitment Statement/Signature” on page 8). This will ensure that the Service Representative arrives with the tools and information needed to install and verify the instrument’s operation.

Conventions

This document uses the symbol shown below to identify notes of importance.



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

Saturn DigiSizer 5200 Preinstallation Instructions

Section 1. All Saturn DigiSizer 5200 Systems

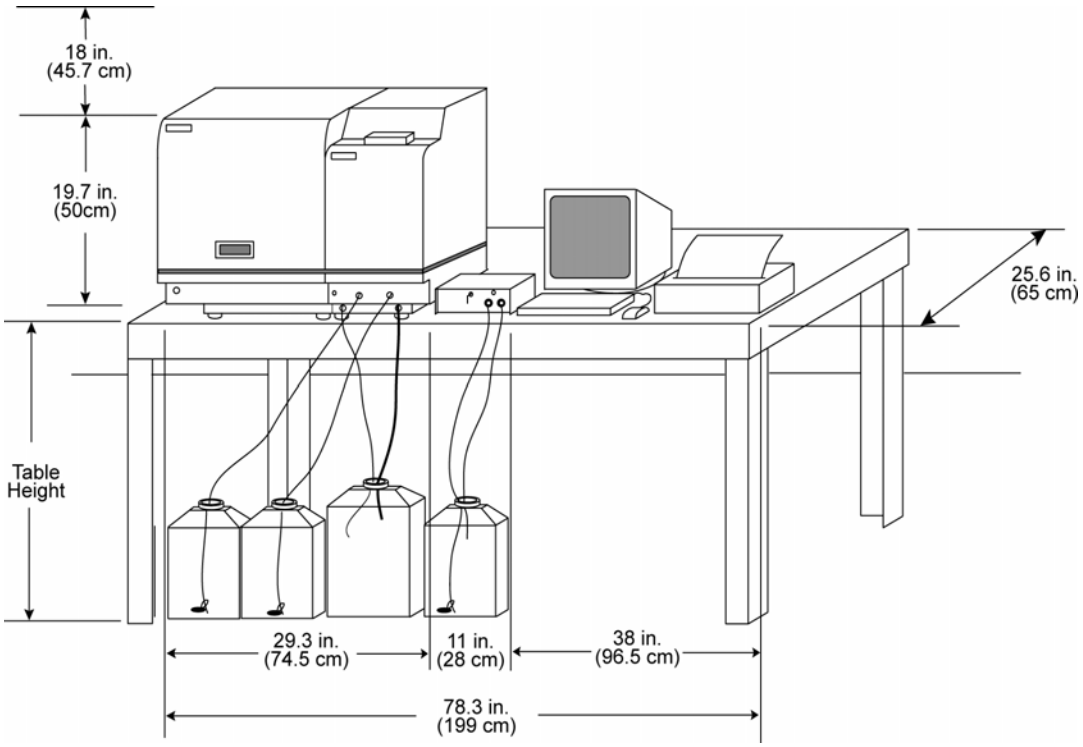
Instrument Space

The instrument should be accessible from all sides. An obstructed lab work space that will accommodate the specifications below, and that is capable of supporting at least 130 lb (74 kg), is needed for the DigiSizer and the Liquid Sample Handling Unit (LSHU).

Saturn DigiSizer Height 19.7 in (50 cm)
Width: 18.5 in. (47 cm)
Depth: 25.6 in. (65 cm)
Weight: 99 lbs (45 kg)

Liquid Sample Handling Unit Height: 19.7 in. (50 cm)
Width: 10.8 in. (27.5 cm)
Depth: 25.6 in.(65 cm)
Weight: 78 lbs (29 kg)

In addition, the computer and printer will require a space approximately 38 in.(96.5 cm) wide.



The height of the Saturn DigiSizer 5200 and LSHU is 19.7 in. (50 cm). An additional, 18 inches (45.7 cm) is required for clearance when the front door is opened (raised). 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.

An unobstructed area below the analyzer to accommodate the water and waste containers is also required.

Prior to installation, careful consideration should be given to the area in your lab where the Saturn DigiSizer 5200 and its associated components will be located.

Environmental Factors

Power

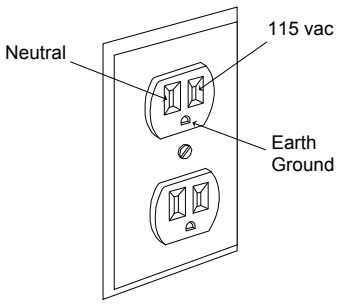
The Saturn DigiSizer 5200 is designed to operate with 100, 120, or 240 VAC $\pm$ 10% at 50 or 60 Hz. Noise-free power of the correct voltage and frequency, with a safety earth ground, should be available through a standard wall receptacle.

The Saturn DigiSizer 5200 requires either 3 Amps for 100 or 120 VAC operation or 1.6 Amps for 220 or 240 VAC operation, $\pm$ 10% at 50/60 Hz. There should also be sufficient outlets for the computer, monitor, and 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**.**
- Place the analyzer close to an air conditioning or heater vent.

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:

Temperature: Ambient: + 10°C to 35°C, stable to within ± 3°C, for operation
Storage: - 10° to 55°C

Humidity: Up to 90% (non-condensing) for the DigiSizer and the Liquid Sample Handling Unit

20 to 80% (non-condensing) for the computer and peripheral devices

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.

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 Saturn DigiSizer 5200 at your facility.

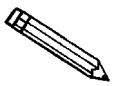
Instrument and Accessories

Computer System

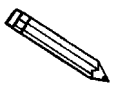
We recommend that you purchase the computer to be used with the Saturn DigiSizer 5200 Analyzer from Micromeritics. We thoroughly test Microsoft Windows® operating systems with our application and offer technical support and maintenance for the computers we provide.

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

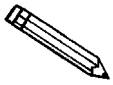
- Pentium 333 MHz computer (or equivalent)
- One CD ROM drive
- 128 megabytes of main memory
- 1-gigabyte hard disk space
- SVGA monitor (800 x 600 minimum resolution)
- Windows 2000 or Windows XP Professional
- Ethernet card
- Mouse
- Printer that is IBM Graphics or Epson LQ compatible
- UPS for computer (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.

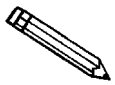
Potential Computer Problems

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.

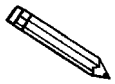
Computers not purchased from Micromeritics, which meet the requirements listed above, may still not function properly due to peripheral components (such as network cards, modems, or sound cards), which interfere with communications between the instrument and the computer.

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 Saturn DigiSizer 5200 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.



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 the 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.

Laboratory Equipment and Supplies

Deionized or Distilled Water

If using water as the dispersant media, the water must be deionized and well-filtered, then deaerated using the AquaPrep™. Distilled water can also be used.

Dispersant Agents

A solution of 0.05% (by weight) sodium metaphosphate is required to complete instrument and operational verification.

DO NOT:
- Use *tap* water for dispersing fluid.
- Use dispersing products manufactured for use as dish washing or clothes washing aids.

Ultrasonic Bath or Probe

Micromeritics recommends a probe (capable of delivering at minimum 50 watts at the tip) or a bath (capable of ultrasonic energy between 23 to 55 kHz) to complete the installation.

DO NOT:
- Use the MasterTech 052 (if purchased) for the primary dispersion of the sample. The MasterTech is not designed for this purpose; it is designed for ***redispersion only***.

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 15 of the Checklist.

- Micromeritics offers application assistance through our Materials Analysis Lab.

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 on page 16.

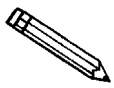
Please inform Micromeritics how much advance notice you require to obtain clearance.

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 16 of the Checklist.

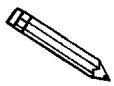
- After you return the Checklist to Micromeritics, your Micromeritics representative will contact you to confirm an installation date.

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 on the following page.



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. Saturn DigiSizer 5200 *confirm* Systems Only

Personnel Requirements

The Saturn DigiSizer 5200 ***confirm*** Analysis System is comprised of:

- The Saturn DigiSizer 5200, the Liquid Sample Handling Unit, the AquaPrep, and accessories
- The DigiSizer 5200 ***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 DigiSizer 5200 ***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 Saturn DigiSizer 5200 computer will be connected to a Local Area Network, your Network/Windows administrator must be available to install the network connection. Also, if the Saturn DigiSizer 5200 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 Saturn DigiSizer 5200 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 17.

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

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 19 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		✓	

Saturn DigiSizer 5200 Preinstallation Checklist

Section 1. All Saturn DigiSizer 5200 Systems

Instrument Space

Instrument Location	Refer to page	Yes	No
Will the instrument be placed on a surface which allows access to the front and back?	2	___	___
Can the lab area where the instrument and computer will be placed accommodate the combined DigiSizer and LSHU width of 29.3 inches (75.4 cm), the computer and printer width of approximately 38 in. (96.5 cm)?	2	___	___
Can the lab table accommodate the instrument depth requirement of 25.6 inches (65 cm), plus any additional depth required for peripheral equipment?	2	___	___
Can the lab area accommodate the instrument height (with front door raised) of 35.7 in. (50 cm)?	2	___	___
Are there any obstructions in the space above the combined heights of the table and analyzer?	2	___	___
Can the lab area accommodate the required space beneath the instrument for the water and waste containers?	2	___	___

Environmental Factors

Environmental Factor	Refer to page	Yes	No
Is power installed with correct voltage and frequency, and a safety earth ground?	3	___	___
Is storage space available for the accessories?	4	___	___
Are temperature and humidity controlled within recommended specifications?	4	___	___
Are hazards present or precautions necessary in area of installation? If **Yes**, please explain_____ _____ _____	4	___	___
Are safety measures required? If **Yes**, please explain_____ _____ _____	5	___	___

Instrument and Accessories

Instrument and Accessories	Refer to page	Yes	No
Was the computer purchased from Micromeritics?	5	___	___
If **NO**, does the computer meet Micromeritics' minimum requirements?	5	___	___
Are all products, options, and quantities ordered present and undamaged?	6	___	___
Has any apparent shipping damage been reported to the Carrier?	6	___	___
Has Micromeritics been notified of any missing items or damage?	6	___	___

Laboratory Equipment and Supplies

Item	Refer to page	Yes	No
Is deionized or distilled water available?	7	___	__
Is a proper dispersing agent available?	7	___	___
Is an ultrasonic probe or an ultrasonic bath available?	7	___	___

Application Related Issues

Application Issue	Refer to page	Yes	No
What types of samples will you be testing? _____ _____ _____ _____	8	___	___
Will you require any application assistance from Micromeritics Materials Analysis Laboratory?	8	___	___

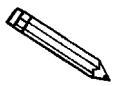
Personnel Security Clearance

Security Clearance	Refer to page	Yes	No
Are there any special arrangements required concerning security clearance? If **Yes**, please explain in detail _____ _____ _____ _____	8	___	___

Projected Install Date

When would installation be most convenient? Date: ____/____/____
(This is not a commitment for a specific installation 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 Saturn DigiSizer 5200 Analyzer to be installed.

SIGNATURE: _____

NAME (Printed): _____

TITLE (Printed): _____

COMPANY: _____

CITY, STATE and ZIP: _____

PHONE NUMBER: _____

DATE: _____

INSTRUMENT MODEL _____ SERIAL NUMBER_____

Section 2. Saturn DigiSizer 5200 *confirm* Systems Only

Complete this section **only** if you purchased a Saturn DigiSizer 5200 ***confirm*** System.

Personnel Requirements

In order to install and operate the Saturn DigiSizer 5200 ***confirm*** Analysis System, the laboratory personnel responsible for the functions listed below must be identified and available during the installation process:

Please provide the names of the persons who will be responsible for these functions during installation and operation of the instrument.

Function	Person Responsible	Refer to page	Yes	No
Windows Administration	_____	10		
Does the administrator have the ability to create and manage Windows user groups?			___	___
Does the administrator have the ability to create and manage Windows users?			___	___
Does the administrator have Windows Administrator access?			___	___
Will the Windows administrator be available the first and last day of installation?			___	___
Network Administration	_____	10		
Will the Saturn DigiSizer 5200 computer be connected to a Local Area Network (LAN)?			___	___
If yes:				
Does the administrator have the ability to connect the computer to the network?			___	___
Does the administrator have the ability to correct network connection problems?			___	___
Does the administrator have the ability to set necessary network drive and directory access?			___	___

Function	Person Responsible	Refer to page	Yes	No
Will Saturn DigiSizer 5200 files need to be accessible to a laboratory information application?			___	___
If yes: Does the administrator have the necessary file permissions?			___	___
Will the administrator be available during installation?			___	___
Micromeritics Application Administration	_____	10		
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 DigiSizer application users been entered in the Administrator Utility User Profiles Worksheet (located on the following page)?	11	___	___

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:**__________________________			
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Name______________________________ **Windows User ID:**______________________ **Full Name:**__________________________			

Application User	Administrator	Developer	Analyst
Name____________________ **Windows User ID:**____________________ **Full Name:**____________________			
Name____________________ **Windows User ID:**____________________ **Full Name:**____________________			
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