



SediGraph[®] III Plus

Analysis System

Preinstallation Instructions and Checklist

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Overview

This document describes how to prepare your site for installation of the SediGraph III Plus. The document is organized into two parts:

Part 1 - Preinstallation Instructions contain information that will help you analyze your site and answer the questions in the checklist.

Part 2 - Preinstallation Checklist contains questions about instrument location and your laboratory environment, equipment, and supplies. For each question, check **Yes** if the condition applies to your laboratory or **No** if it does not. When you have completed the checklist, return it to Micromeritics. Refer to [Commitment Statement/Signature](#), page 7.

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.

Part 1. Preinstallation Instructions

Unpacking and Inspection

When the instrument is received, unpack and inspect the contents of the shipping carton(s). Use the packing list to verify that all products, accessories, software, and documentation are received intact and in the correct quantity. The shipping carton(s) and contents should be inspected within a few days of receipt in the event damage or loss has occurred. See **Shipping Damage** below.

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.

DO:

- Keep all software, manuals, and accessories with the instrument.
- Keep all boxes and shipping cartons 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.

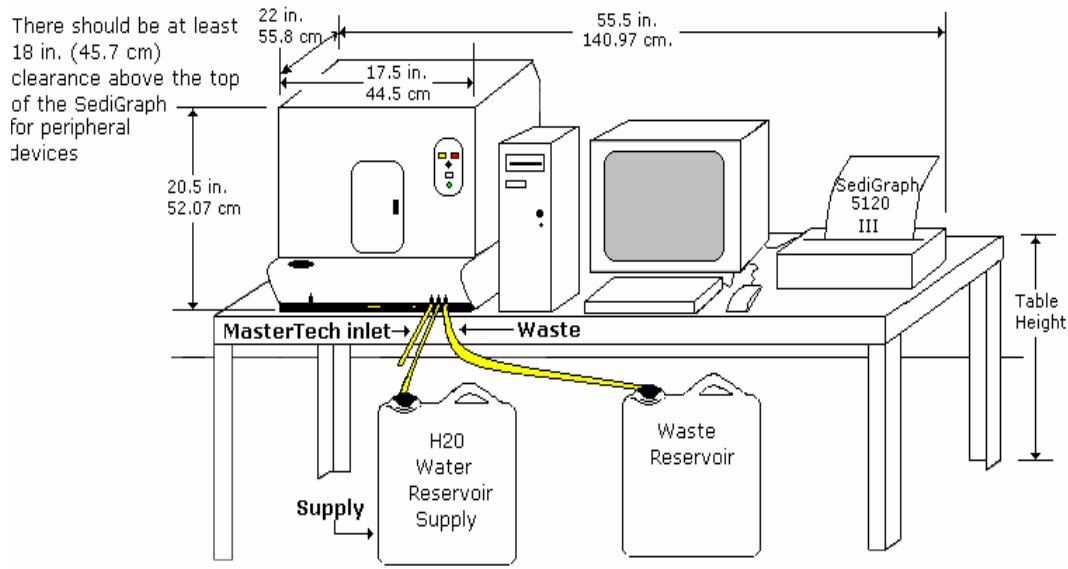
DO NOT:

- Ask Micromeritics to file a claim for shipping damage.
- Discard shipping boxes and containers until installation is complete.

Instrument Space

The SediGraph III Plus is designed to be installed on a lab cabinet or table top surface. The SediGraph is 17.5 inches (44.45 cm) wide, 22 inches (55.88 cm) deep, and 20.5 inches (52.07 cm) high. A table or counter top capable of supporting 100 pounds (45.36 kg) is required for the SediGraph and its peripheral equipment.

Micromeritics considers a table top installation where the front and rear of the instrument are open and easily accessible, and where the supply and waste receptacles are placed beneath the instrument to be the preferred choice. In this configuration, a greater amount of floor space is provided in front of the instrument for routine tasks associated with sample preparation and analysis. Other benefits associated with this choice include easier access to the fluid containers and all of the peripheral equipment.



The lab table (or cabinet) must accommodate the instrument and computer's combined width of 55.5 in (140.97 cm), a depth of 22 in. (55.88 cm) and the width and depth of the peripheral equipment, such as an ultrasonic probe assembly or a MasterTech auto-sampler unit.

The height of the SediGraph III Plus is 20.5 in. (52.07 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, pipes, light fixtures etc.

The lab must accommodate 1 square foot (0.30 square meters) for each fluid container. There are two containers in use, Supply and Waste/Overflow. For a standard installation, the containers must be within 6 feet (1.83 m) of the instrument.

Environmental Factors

Power

The SediGraph III Plus is designed to operate with 100, 115, or 230 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. These requirements can be checked using a Circuit Analyzer (available at most hardware or electronic supply houses) or a multimeter.

DO:

- Install the instrument and peripheral devices on their 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 available for the storage of accessories and spare parts.

Temperature and Humidity

Temperature must be controlled to within the following:

Ambient: +10°C (up to 40°C for operation)

Storage: -10°C to 55°C

Humidity must be controlled to within the following:

- Up to 90% relative (non-condensing) for the SediGraph
- 20 to 80% (non- condensing) for its peripheral devices

DO NOT:

- Allow room temperature or humidity to exceed limits.
- Install the instrument where it is exposed to direct sunlight.
- Locate the instrument near air conditioning or heater 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 SediGraph III Plus at your facility.

Computer System

We recommend that you purchase the computer to be used with your analyzer from Micromeritics. We thoroughly test Microsoft Windows® operating systems with our application and offer technical support and maintenance for the computers we provide. For instruments not installed by Micromeritics, please observe the following notes.



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 LIMMS.

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

- Windows 2000, XP Professional or higher
- Ethernet port
- Ethernet switch - required only if running multiple instruments
- RS232 port (if using MasterTech 052)

* Windows 7 Professional is recommended for the best user experience.

** If the computer is to be connected to a network, two Ethernet ports are required.

Laboratory Equipment and Supplies

In order to obtain the most accurate results, the SediGraph III Plus requires:

- The dispersing fluid to contain the same concentration of dispersant for each run.
- The same weight of sample powder for each sample run.
- An ultrasonic probe is suggested for dispersion. Be sure to use the ultrasonic probe at the same output setting and dispersion time for each run of the same material
- An analytical scale with the capacity of 100 grams of measurement and 1 mg readability.

Deionized Water

Ensure deionized water is available in sufficient quantities. There should be at minimum 10 liters of deionized water for the installation.

Dispersants

A solution of sodium metaphosphate will be needed for the installation and verification of the instrument operation. The proper solution for Medium Particle Size Reference Material (MPSRM, garnet) can be made by adding 0.5 gram sodium metaphosphate to a liter of deionized water, (5 grams of sodium metaphosphate to 10 liters of deionized water).

For customers requiring the Fine Particle Size Reference Material (FPSRM, Calcium Carbonate) a concentration of 0.2% sodium metaphosphate and deionized water must be used, 2 grams of sodium metaphosphate to 1000 mL of deionized water (20 grams of sodium metaphosphate to 10 liters of deionized water).

DO:

- Use only deionized or distilled water.
- Use chemical dispersants manufactured for the purpose of dispersion. Refer to Appendix B of the *SediGraph III Plus Operators Manual* for further information.

DO NOT:

- Use *Tap* water for the dispersing fluid.
- Use dispersing products manufactured for use as a dish or clothes washing aid. Refer to Appendix B of the *SediGraph III Plus Operators Manual* for further information.

AccuPyc 1340 Or Other Density Measuring Device

If this instrument is going to be installed in an R&D type of environment where the sample density is not known, a Micromeritics AccuPyc, or some other density measuring device, will be needed. Sample density is a required parameter for samples analysis.

Viscosity Measuring Device

An instrument capable of measuring the viscosity of the dispersing sample fluid will be required if the fluid's viscosity numbers are not available from a known source. Viscosity numbers at three temperatures (high, medium, and low) are required for the SediGraph to interpolate the viscosity at any temperature.

Waste Collection/Removal

There will be waste products generated in the operation of the SediGraph III Plus - usually water and dispersant with sample material. A way to dispose of this material on an ongoing basis is needed. A sink is a convenient place for the water-based materials.

If planning to use SediSpense™ or any type of oil-based fluid, waste will need to be disposed by an approved method for hazardous materials.

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 samples in section **Application-Related Issues**, page 9. Micromeritics offers application assistance through our materials analysis laboratory (Micromeritics Analytical Services at 770-662-3630).

Personnel Security Clearance

If security clearance, insurance certificates or any other special arrangements are required for Micromeritics employees to enter your facility, please explain in the section **Personnel Security Clearance**, page 10. Please inform Micromeritics how much advance notice you require to obtain clearance.

Projected Installation Date

After reading the site preparation requirements in this document, enter a date your site will be prepared and a date for installation. Enter the date in section **Projected Installation Date**, page 10. After you return the checklist to Micromeritics, your Micromeritics representative will contact you to confirm an installation date.

Commitment Statement/Signature

Read this document carefully and complete the checklist. If you are unsure about any part of this document or the checklist, please contact the Micromeritics Service Department for clarification. When you have completed the Preinstallation Checklist, date it, and send it to Micromeritics as described below.

Within the United States:

FAX checklist to:

Service Operations Manager
(770) 662-3604

OR

Mail checklist to:

Micromeritics Corporation
4356 Communications Drive
Norcross, Georgia 30093
Attn: Service Operations Manager

Part 2. Preinstallation Checklist

Unpacking and Inspection

Unpacking and Inspection	Yes	No
Have the shipping cartons been unpacked and their contents inspected?	___	___
Was there any shipping damage? If Yes , has a claim been filed with the freight carrier?	___ ___	___ ___
Were all items listed on the packing list received? If No , has Micromeritics been notified?	___ ___	___ ___

Instrument Space

Instrument Space	Yes	No
Can the lab area where the instrument and computer will be placed accommodate the combined dimensions of the instrument, accessories, computer and printer?	___	___

Environmental Factors

Item	Yes	No
Is power available with the correct voltage and frequency, and a safety earth ground?	___	___
Are temperature and humidity controlled within specifications?	___	___
Are hazards present or precautions necessary in area of installation? If Yes , please explain _____ _____	___	___
Are safety measures required? If Yes , please explain _____ _____	___	___

Computer System

Instrument and Accessories	Yes	No
Was the computer purchased from Micromeritics? If NO , does the computer meet Micromeritics' minimum requirements?	___	___

Laboratory Equipment and Supplies

Item	Yes	No
Are sufficient quantities of deionized water available?	___	___
Are sufficient supplies of sodium metaphosphate available?	___	___
Is a device for measuring density available?	___	___
Are the fluid's viscosity numbers available? If NO , is a viscosity measuring device available?	___	___
Is a method for waste collection and removal in place?	___	___
Do you have an analytical balance with the capacity of 100 grams measurement and 1 mg resolution?	___	___

Application-Related Issues

Application Issue	Yes	No
What types of samples will you be testing? _____ _____ _____		
Will these samples require pretreatment?	___	___
Will you require any application assistance from Micromeritics Analytical Services?	___	___

Personnel Security Clearance

Security Clearance	Yes	No
Are there any special arrangements required concerning security clearance? If Yes , please explain in detail _____ _____ _____ _____	—	—

Projected Installation Date

When would installation be most convenient? Date: ____/____/____

(This is not a commitment for a specific installation date.)

Commitment Statement/Signature

I have read this document and understand my responsibilities regarding preparations for the installation of our instrument. I believe this site is ready for the SediGraph III Plus Analyzer to be installed.

SIGNATURE: _____

NAME (Printed): _____

TITLE (Printed): _____

COMPANY: _____

CITY, STATE and ZIP: _____

PHONE NUMBER: _____

FAX NUMBER: _____

E-MAIL: _____

DATE: _____

INSTRUMENT MODEL: _____ SERIAL NUMBER: _____