㎖ micromeritics®

Elzone II 5390

Analysis System

Preinstallation Instructions and Checklist

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Table of Contents

Overview

This document describes how to prepare your site for installation of the Elzone II 5390 system. It contains instructions for both Elzone II 5390 standard systems and Elzone 5390 Confirm (21 CFR11) systems.

The document is organized into four parts:

- **Part 1** contains instructions for all Elzone II 5390 systems.

- **Part 2** contains additional instructions for Elzone II 5390 Confirm systems only.

- **Part 3** contains a checklist to be completed for all Elzone II 5390 systems.

- **Part 4** contains an additional checklist to be completed for 5390 Confirm systems only.

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

The *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(s), return it to Micromeritics as described on page 7.

Part 1. Elzone II 5390 Preinstallation Instructions: All Elzone Systems

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 couple of days in the event damage or loss has occurred (see **Shipping Damage**).

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 you discover damage or loss of equipment 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

An unobstructed lab work space that will accommodate the specifications below is needed for the Elzone II 5390.

Elzone 5390

Height: 54.5 cm (21.5 in.)
Width: 38 cm (15 in.)
Depth: 40.5 cm (16 in.)
Weight: 28 kg (61 pounds)

Supply and Waste Containers:
Width: 17.8 cm (7 in.)

Computer and Printer:
Width: Approximately 96.5 cm (38 in.)

Environmental Factors

Power

The Elzone II 5390 is designed to operate with 100, 120, 230, 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. These requirements can be checked by using a Circuit Analyzer (available at most hardware or electronic supply houses) or a multimeter.

The Elzone II 5390 requires either 1.5 Amps for 100 or 120 VAC operation or 0.75 Amps for 230 or 240 VAC operation. There should also be sufficient outlets for the computer, monitor, printer, and any other peripheral devices.

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**.**

Temperature and Humidity

Temperature and humidity must be controlled to within the following:

Temperature: Ambient: + 10ºC to 45ºC, stable to within $\pm$ 3ºC, for operation

Storage: - 10º to 55ºC

Humidity: 20 to 80% relative (non-condensing)

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.

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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 Elzone II 5390 at your facility.

Instrument and Accessories

Computer System

We recommend that you purchase the computer to be used with the Elzone II 5390 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 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:

- Pentium 333 MHz CPU (or equivalent)
- One CD ROM drive
- 128 megabytes of main memory
- 1-gigabyte hard disk space
- Monitor supporting 1024 x 768 resolution
- Windows 2000 or Windows XP Professional
- Ethernet port (capable of communicating with a 10 base-T ethernet card)
- USB V 2.0 or higher port if you purchased the optional camera
- UPS (Uninterruptible Power Supply) for computer (optional)*

* A UPS with line conditioner is useful for saving data during a power outage. It is also useful for keeping power line noise from entering the Elzone and computer.

Laboratory Equipment and Supplies

The following supplies are required for installation and operational verification of the analyzer:

- Electrolyte - aqueous sodium chloride, 4 L
- Distilled or deionized water
- Electrolyte filtration system - 0.2 μm minimum
- 150 - 200 mL beakers
- One-liter flask with cover
- Detergent
- Disposable pipettes

During installation, an orifice tube calibration and reference material analysis will be performed to verify system operation. These procedures will require an aqueous 2% sodium chloride electrolyte.

The solution should be prepared from distilled water using technical grade salt. Electrolytes must be filtered so that they are virtually free of particles for best results, or at least free of particles above the threshold intended to be used in an analysis.

Filter cartridges of the high area type provide the best filtration and the easiest handling. Only a small liquid head and no pumping or pressurizing is required. Filtering rates of 100 mL/min can be achieved with 0.2-micrometer (sterile) filters and greater rates for larger pore filters. One filter can process many hundreds of liters. Some users prefer to process only enough electrolyte for one day's operation to avoid contamination problems. This electrolyte should be held at the same temperature as the area of the analytical instrument and its container should remain sealed except when actually being poured from.

The ElectroPrep filtration system is available from Micromeritics. This system recirculates electrolyte through a filter cartridge that retains particles greater than 0.1- to 0.2-μm in diameter. The electrolyte is contained in a 9-liter (2-gallon) container; it circulates at a rate of 0.5 L/min. It provides a supply of clean electrolyte which ensures a low baseline when conducting particle analyses using Micromeritics' Elzone II 5390 analyzer. If you would like more information about the ElectroPrep, contact your Micromeritics sales representative.

Use the following table to determine:

- the quantity of aqueous 2% sodium chloride electrolyte needed for the beaker
- the appropriate electrolyte (sample) container
- the type of agitator
- the speed setting

required for orifice tube calibration.

Elzone II 5390 Orifice Tube Calibration Reference Materials

Orifice Tube (μm)	Electrolyte Quantity (mL)	Electrolyte Container	Agitator	Speed Setting
19	20	Blood Vial	None	0
30	20	Blood Vial	None	0
48	100	150 mL Beaker	Stirrer	3
76	100	150 mL Beaker	Stirrer	3
95	100	150 mL Beaker	Stirrer	3
150	100	150 mL Beaker	Stirrer	4
190	200	240 mL Beaker	Stirrer	4
300	200	240 mL Beaker	Stirrer	7
380	200	240 mL Beaker	Stirrer	7

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Personnel Security Clearance

If security clearances, insurance certificates, or any other special arrangements are required for Micromeritics employees to enter your facility, please explain on page 12. Please inform Micromeritics how much advance notice you require to obtain clearance.

Computer Administrator

If a Computer Administrator at your facility will be needed to set up the computer or install software, please enter the administrator's name in the checklist and ensure that he or she will be available during the installation.

Projected Installation 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 13 of the Checklist. 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(s), date it, and FAX 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
                                     One Micromeritics Drive
                                     Norcross, Georgia 30093
                                     Attn: Service Operations Manager

Outside the United States:

Contact your local Micromeritics representative.

Part 2. PreInstallation Instructions: Elzone II 5390 Confirm (21 CFR11) Systems Only

This section applies only if you are installing an Elzone II 5390 Confirm Analysis System.

Personnel Requirements

The Elzone II 5390 Confirm Analysis System is comprised of:

- The Elzone II 5390 and accessories

- The Elzone II 5390 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.

If the Elzone II 5390 computer will be connected to a Local Area Network, your Network/ Windows administrator must be available to install the network connection. Also, if the Elzone II 5390 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 Elzone II 5390 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 14.

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

When the Micromeritics software is installed, the software creates three Windows user groups:

- MicDevelopers
- MicAnalysts
- MicService

These user groups correspond to the user profiles that can be assigned in the Administrator Utility as follows:

- The **MicDevelopers** user group is created to contain users who will be assigned the **Developer** profile in the Administrator Utility. The Developer profile enables users to develop and enter analysis methods. A Developer has access to all functions of the Micromeritics application.

- The **MicAnalysts** user group is created to contain users who will be assigned the **Analyst** profile in the Administrator Utility. The Analysts profile enables users to perform analyses using pre-defined analysis methods. An Analyst has access to a limited set of the Micromeritics application features.

- The **MicService** user group is created for Micromeritics Service Personnel. These users will be assigned the **Developer** profile in the Administrator Utility and have full access to the functions of the Micromeritics application. Although Service Personnel have the same access rights as Developers, a separate user group is created for them because Service Personnel have different directory and file access permissions.

In addition to the profiles described above, a Developer can also be assigned an Administrator privilege. The Administrator privilege enables the user to establish and control user profiles.

Function	Developer	Analyst
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	✓	✓
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	✓	

Part 3. Elzone II 5390 Preinstallation Checklist: All Elzone Systems

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 Location	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

Environmental Factor	Yes	No
Is power installed with 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_____	___	___

Instrument and Accessories

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
Is the appropriate electrolyte available?	___	___
Is an appropriate electrolyte filtering system available?	___	___
Are the other supplies needed to perform analyses available?	___	___

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Personnel Security Clearance

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

Computer Administrator

Function	Person Responsible	Yes	No
Will a Computer Administrator be needed to set up the computer or install software during installation? If **Yes**, will the Computer Administrator be available during installation?	_____ Phone:_____ E-mail_____	___ ___	___ ___

Projected Installation 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 Part 4, 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 instrument. I believe this site is ready for the Elzone II 5390 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_____

Part 4. Preinstallation Checklist: Elzone II 5390 Confirm Systems Only

Complete this checklist only if you are installing an Elzone II 5390 Confirm Analysis System.

Personnel Requirements

In order to install and operate the Elzone II 5390 Confirm Analysis System, the laboratory personnel responsible for the functions listed below must be identified and available during the installation process.

If the instrument is to be installed by Micromeritics, please provide the names of the persons who will be responsible for these functions during installation and operation of the instrument.

Function	Person Responsible	Yes	No
Windows Administration	_____		
Does the Windows 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	_____		
Will the Elzone II 5390 computer be connected to a Local Area Network (LAN)?		___	___
If yes: Does the network 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	Yes	No
Will Elzone II 5390 files need to be accessible to a laboratory information application?		___	___
If yes: Does the application administrator have the necessary file permissions?		___	___
Will the administrator be available during installation?		___	___
Micromeritics Application Administration	_____		
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	Yes	No
Have the Elzone II 5390 application users been entered in the Administrator Utility User Profiles Worksheet (located on the following page)?	___	___

Administrator Utility User Profiles Worksheet

*User Name is the person's Windows User ID.

Service users should be added to the MicService Windows user group and assigned a **Developer user profile in the Administrator Utility.

Application User	Developer	Analyst	Service**
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			
User Name*_____ Full Name_____			

***User Name** is the person's Windows User ID.

****Service** users should be added to the MicService Windows user group and assigned a **Developer** user profile in the Administrator Utility.

Application User	Developer	Analyst	Service**
User Name*_____ **Full Name**_____			
User Name*_____ **Full Name**_____			
User Name*_____ **Full Name**_____			
User Name*_____ **Full Name**_____			
User Name*_____ **Full Name**_____			
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User Name*_____ **Full Name**_____			