

AUTOCHEM[®] II 2920

AUTOMATED CATALYST CHARACTERIZATION SYSTEM



micromeritics[®]

ERROR MESSAGES

Mar 2022

CORPORATE PROFILE

Micromeritics Instrument Corporation is the world's leading supplier of high-performance systems to characterize particles, powders and porous materials with a focus on physical properties, chemical activity, and flow properties. Our technology portfolio includes: pycnometry, adsorption, dynamic chemisorption, particle size and shape, intrusion porosimetry, powder rheology, and activity testing of catalysts. The company has R&D and manufacturing sites in the USA, UK, and Spain, and direct sales and service operations throughout the Americas, Europe, and Asia. Micromeritics systems are the instruments-of-choice in more than 10,000 laboratories of the world's most innovative companies, prestigious government, and academic institutions. Our world-class scientists and responsive support teams enable customer success by applying Micromeritics technology to the most demanding applications. For more information, please visit www.Micromeritics.com.

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ERROR MESSAGES

If the *Action* response indicates to contact a Micromeritics service representative, record the error message, then make backup copies of any files involved in the operation.

2420 Invalid defaults. Program will terminate.

Cause: The application .ini file is missing or invalid.

Action: Re-install the application from the installation media.

2421 Invalid file subsystem. Program will terminate.

Cause: The application could not read the default method files.

Action: Delete the default method files and restart the application

2432 Invalid response from MMI 'FILE_READ' request.

Cause: An internal processing and/or hardware error has occurred.

Action: Contact a Micromeritics service representative if this error message continues.

2433 New entries have been found in this directory. Refresh the directory information?

Cause: Several analyzer files have been added to this directory by some function other than the analysis application.

Action: Click **Yes** to update the directory information with data from each new file. This operation may take a minute.

Click **No** to locate the file manually. This option may be feasible if a large number of files have been copied into the directory and the file name is known.

2434 File [n] — Subset [n] wrote [n] bytes, expected [n] bytes.

Cause: An internal processing and/or hardware error has occurred.

Action: Contact your Micromeritics Service Representative.

2437 File name [n] does not exist.

2437 Overlay file [n] does not exist.

Cause: The file selected in the report option does not exist.

Action: Enter an existing file specification, or select a file name from the list box.

2438 Cannot open scheduling diagnostic data save file: [n].

Cause: The file necessary for **Unit [n] > Diagnostics > Schedule Diagnostic Test** (...\\Hardware\\scheddiagtests.dat) could not be read. It is likely corrupted.

Action: Exit the application. Delete or rename the file mentioned in the error message and restart the application. A new file will be created. Also ensure that the hardware directory is not write-protected.

2448 The export data file directory [n] cannot be used. Resetting to the installation directory.

2448 The reference file directory [n] cannot be used. Resetting to the installation directory.

2448 Default convert sample file directory [n] is invalid. Resetting to the installation directory.

2448 The library directory [n] cannot be used. Please re-install to make use of Windows libraries for file management. Resetting to the installation directory.

2448 Default mass spectrometer file directory [n] is invalid. Resetting to the installation directory.

2448 Default parameter file directory [n] is invalid. Resetting to the installation directory.

2448 Problem diagnostic directory [n] is invalid. Resetting to the installation directory.

2448 User python script directory [n] is invalid. Resetting to the installation directory.

2448 Default report directory [n] is invalid. Resetting to the installation directory.

2448 Default sample file directory [n] is invalid. Resetting to the installation directory.

2448 The SPC report directory [n] is invalid. Resetting to the installation directory.

2448 The z-table file directory [n] cannot be used. Resetting to the installation directory.

2448 File directory [n] is invalid. Resetting to the installation directory.

2448 Default script test file directory [n] is invalid. Resetting to the installation directory.

Cause: A working directory specified in the .INI file is invalid, has been moved or deleted.

Action: The installation directory will be substituted. The next time a file is opened, use the directories list to move to the correct directory.

2449 This field does not contain a valid file specification.

Cause: An invalid file name was entered.

Action: See the description of file naming conventions in a Windows manual, then re-enter the name.

2451 The specified folder does not exist.

Cause: Path entered in the file selector does not exist.

Action: Enter the correct file path, or browse for the correct file path.

2452 The instrument is busy performing an operation of which this application is unaware. Do you want to cancel?

Cause: The instrument is performing an operation which is not recognized by the application.

Action: Click **Yes** to have the application cancel the operation. Click **No** to allow the operation to continue.

2454 Too many selections for a print-to-file operation. Only the first [n] selections will be processed. Please reselect the remainder.

2455 Too many selections for an export-to-file operation. Only the first [n] selections will be processed. Please reselect the remainder

Cause: Too many files were selected for this operation.

Action: Select only the number of files specified in the message.

2456 Insufficient file handles available. Application cannot continue.

Cause: More than 50 files are open at the same time.

Action: Refer to a Windows operating system manual then set the limit for open files to 50 or greater. Alternatively, close any unused open files.

2458 An instrument is performing a critical operation. Wait a few moments before exiting the application.

Cause: An attempt was made to exit the application while the analyzer was performing a critical operation. This operation must be completed before the application can be exited.

Action: Wait a short time and attempt to exit the application again.

2459 An instrument is busy. A delay in restarting this application could result in loss of new data. Continue with program Exit?

Cause: An attempt was made to exit the application while an analysis was in progress. While this is possible, the data collected when the application is inactive will not be permanently recorded until the application is restarted. A power failure to the analyzer could cause some data to be lost. Continued data collection may also exhaust the memory of the controller.

Action: If not concerned with the potential for loss of data should a power failure occur, click **Yes** to continue; otherwise, click **No**.

2460 Fatal Communications error on [n].

Cause: There was a fatal error in communication between the application and the software in the analyzer. All displays for that analyzer will be closed.

Action: Ensure that the analyzer is connected to the computer on the communications port configured in the *Setup* program. Stop and restart the analyzer application. Contact your Micromeritics Service Representative.

2461 No instruments are in operation. This application will unconditionally terminate.

Cause: At least one analyzer must be active for the application to operate. The initialization of all analyzers configured with the *Setup* program has failed. The application stops.

Action A: Usually this message is preceded by another message giving the reason for the analyzer's failure to initialize. Refer to the instructions for that message.

Action B: Ensure that the analyzer is attached to the computer on the communications port configured with the *Setup* program. Verify that the analyzer's power switch is in the ON position and that the light on the front panel is illuminated. Contact a Micromeritics service representative if this error message continues.

2477 [n] did not properly initialize.

Cause: The application was unable to initialize this analyzer. This is usually caused by one of the conditions listed in the previous error messages.

Action:

- Correct the problem indicated in the previous error message, then restart the application.
- Run the *Setup* program and ensure that a valid port is specified; if not, specify a valid one when prompted.
- Reinstall the application, then restart the application.
- Contact a Micromeritics service representative if this error message continues.

2479 Cannot open [n] because it is a [n] file.

Cause: The file cannot be opened because it came from a different Micromeritics application

Action: Select a different file.

2480 File [n] cannot be analyzed. It is currently being edited.

Cause: An attempt was made to start an analysis using a file that is open for editing.

Action: Finish editing the file, save and close it, then start the analysis.

2481 Error accessing the sample information file [n].

Cause A: An unexplained error prevented access to this file.

Action A: The hard disk drive may be corrupt. Run diagnostics.

Cause B: An attempt was made open a file that is already open, possibly minimized.

Action B: View the minimized icons, locate and maximize the file.

Cause C: A computer or network problem occurred.

Action C: Check the performance of the computer devices or network.

2482 File cannot be opened for writing.

Cause: An attempt was made to open a file currently being used.

Action: Locate the application using the file. In the Micromeritics application, use the Window menu item for a list of all open windows.

2483 An analysis cannot be performed on [n]. It is open for editing and contains errors.

Cause: An attempt was made to use a sample file containing errors that is currently open.

Action: Go to the window containing the file, correct the errors, then save it.

2484 The edit session for [n] must be saved before the analysis. Save changes and continue with the analysis?

Cause: An attempt was made to start an analysis using a file that contains unsaved changes and is open for editing.

Action: Click **Yes** to save the changes, then proceed with the analysis. Click **No** to cancel the analysis, then continue editing the sample file.

2485 Sample file [n] has an invalid status and cannot be used for this operation.

2485 The service test file has an invalid status and cannot be used for this analysis.

Cause: The selected file has a status other than *No Analysis*.

Action: Select a file, or create a new one and click **Replace All** to copy parameters from the file originally selected.

2486 Cannot construct [n] report type. Program will terminate.

Cause A: Full rights to the application folders and files is required.

Action A: Contact a system administrator to have full rights granted.

Cause B: An internal processing and/or hardware error has occurred.

Action B: Contact your Micromeritics Service Representative.

2488 File [n] cannot be opened. It is already in use.**2488 File [n] cannot be opened for editing.**

Cause: The specified file is open for editing.

Action: Check the Window menu item to locate the other edit session or check if the file is open in another application.

2489 File [n] cannot be opened for writing.

Cause A: The specified file in a *Save As* operation is open.

Action A: Select a different file for the *Save As* operation.

2491 Highlighted fields contain errors. Please correct the errors before closing.

Cause: The fields highlighted in red contain invalid entries. The window cannot be closed until all errors are corrected.

Action: Check the entries, correct the errors, then close the window.

2492 This field's entry is invalid.**2493 An entry is required for this field.**

Cause: The highlighted field contains an invalid entry.

Action: Check the entry and correct the error.

2494 Value is out of the valid range.**2495 Enter a value between [n] and [n].**

Cause: The entered value in the highlighted field is outside the valid range of values.

Action: Check the entry, then either enter or select an appropriate value. The valid range is shown in the information bar.

2496 Invalid number.

2497 This field contains an invalid character.

Cause: An invalid number (or character) was entered in the highlighted field.

Action: Check the entry, then either enter or select a valid number (or character).

2498 The requested change to the Sample's status is invalid at this time.

Cause: A request to change the file status, for example, from *automatically collected* to *manually entered* could not be done.

Action: Contact your Micromeritics Service Representative. Record the name of the same file in which the problem occurred.

2499 Sequence number must contain at least 3 digits.

Cause: An attempt was made to enter a sequence number that did not contain at least three digits.

Action: Enter a sequence number that contains at least three digits.

2500 All sample file names that can be created using the sequence number pattern already exist. You may want to modify the next sequence number.

Cause: No more sample files can be created using the currently entered file name sequence number.

Action: Go to **Options > Default Method**, then enter another sequence number.

2502 The file name must contain a \$ character.

Cause: An error occurred in the file being written to during a print operation.

Action: Ensure there is sufficient space on the drive containing the file.

2506 Sample file [n] has a No Analysis status and cannot be used for this operation.

Cause A: An internal processing error has occurred.

Action A: Contact your Micromeritics Service Representative.

Cause B: The selected output device is not installed.

Action B: Select a different output device.

2507 The sample has an invalid status and cannot be used for degassing.

Cause: An attempt was made to degas a sample that has a status other than *No Analysis*.

Action: Select a sample with a status of *No Analysis*.

2508 The selected file [n] does not contain a valid script.

Cause: The selected service test file does not contain any steps or the file has become corrupted.

Action: If the service test file has no steps, open the service test file and add steps to the file using the *Service Test Script* tab.

2513 Unable to read the calibration file [n].

Cause: An invalid calibration file was selected or cannot be read.

Action: Ensure the media containing the calibration file has no problems.

2514 Unable to write the calibration file [n].

Cause: An attempt to save calibration data has failed due to possible media problems.

Action: Ensure the destination location has no problems or choose an alternate media to save the calibration data.

2518 Analysis data are not suitable for smoothing. Smoothing has been disabled.

Cause: The Analysis data contains volume adsorbed values that are less than or equal to zero.

Action: No action required; this is a status message only.

2519 Entered or merged data must have at least two points with unique mass percent values.

Cause: Entered or merged data with less than two data points cannot be smoothed. This message may refer to the number of points in the repeat analysis if it is selected for reporting.

Action: No action required; this is a status message only.

2520 No data points available for reporting.

Cause: The selected sample file does not have collected data and cannot be used for reporting.

Action: Select a different sample file.

2521 Unable to program controller.

Cause: A hardware malfunction has occurred.

Action: Contact your Micromeritics Service Representative.

2522 Invalid controller application file.

Cause: The application's control file has been corrupted or deleted.

Action: Reinstall the analysis program.

2523 Programming the controller failed.**2524 CRC check failed on programming controller.****2525 Unknown error programming controller.****2526 Controller download was not successful.****2527 Controller CRC error on boot block.****2528 Controller DRAM error.****2529 Controller Com 1: error.****2530 Controller Com 2: error.****2531 Controller debug port error.**

Cause: An internal processing and/or hardware error has occurred.

Action: Contact a Micromeritics service representative if this error message continues.

2532 The instrument contains a different software version. Do you want to reset it?

Cause: The application has discovered a different version of application operating in the analyzer.

Action: If there are no analyzers other than the one connected to the computer, click **Yes**, then allow the updated application to load.

2533 Analyzer initialization failed.

Cause: An internal processing and/or hardware error has occurred.

Action: Contact your Micromeritics Service Representative.

2534 Unable to establish the TCP connection with [n].

2534 Unable to establish the TCP connection with the instrument.

Cause: There was a problem establishing communication with the analyzer.

Action: Ensure that the communications cable is seated firmly in the Ethernet slot at the analyzer connection and the computer connection.

Ensure that no other Micromeritics application is initializing another analyzer. If there is another Micromeritics application open and initializing an analyzer, wait until the analyzer initialization completes or is canceled.

Contact a Micromeritics service representative if this error message continues.

2542 The file [n] could not be written. Check that the directory permissions are correct.

Cause: The person logged into the computer does not have write access to the program and/or data directory.

Action: Contact your system administrator set up proper privileges for all users

2548 System status 1 [n].

2548 System status 2 [n].

Cause: There was a problem establishing communication with the analyzer.

Action: Ensure that the communications cable is seated firmly in the Ethernet slot at the analyzer connection and the computer connection. Contact your Micromeritics Service Representative.

2549 Error accessing online manual file [n].

Cause: The Operator Manual file could not be located.

Action A: Reinstall the application.

Action B: Copy the contents of the manual folder from the setup media to the application directory.

2551 Cannot access web page [n].

Cause: The Micromeritics web page for DFT models cannot be accessed. This could be caused by an ISP problem of high internet traffic.

Action: Try the operation later.

2552 Configured serial number does not match instrument.

Cause: An analyzer was substituted without properly changing the analyzer serial number.

Action: Use the installation program to add or move devices as necessary.

2553 Dialog ID [n] can not be created *.*

Cause: A required window could not be found by the application.

Action: Re-install the application.

2554 File [n] does not contain any report data.

Cause: The selected sample file has no reports selected for printing.

Action: Edit the sample file and select reports to print in *Report Options*.

2556 File [n] cannot be opened. It is currently selected for analysis.

Cause: The sample file is currently selected and is undergoing a critical operation.

Action: Open the sample file after the critical operation has completed.

2557 Directory [n] does not exist.

Cause: The directory entered in a file selector is not valid.

Action: Enter a valid directory.

2558 The instrument is busy. The requested operation cannot be executed.

Cause: The analyzer is analyzing and cannot be interrupted.

Action: Try the operation later.

2560 File [n] cannot be created or opened. It has an unrecognized extension.

2560 File [n] cannot be created. It has an unrecognized extension.

Cause: The extension specified in the file you are trying to create is not one which is recognized by the application.

Action: Change the extension of the file in the file name field of the file selector.

2563 Cannot write. File or directory [n] read only.

Cause: The specified file name is marked as read-only

Action: Select a different file name.

2564 Directory database [n] error [n].

Cause: There is a problem creating the directory file used in file selectors.

Action: Verify the directory specified in this message is not marked read-only.

2570 Instrument log database could not be opened: [n]

2571 Instrument log database [n] error [n].

Cause: There is a problem opening the analyzer log file [SN.LOG].

Action: Exit the application. Go to the \HARDWARE subdirectory of the analyzer's program directory and rename the [SN.LOG] file where SN is the serial number of the analyzer. A new log file will be created.

2572 File [n] already selected for the analysis.

Cause: The file selected for analysis on one port has already been specified for another port.

Action: Select a different sample file for each port.

2573 A maximum of [n] files may be selected.

2573 A maximum of [n] files may be selected for analysis.

Cause: When using one file selector to select samples for all ports, the number of samples selected exceeds the number of ports on the analyzer.

Action: Select the proper number of samples or pick the sample for each port individually.

2574 No samples, entered samples, or completed samples selected.

Cause: When using one file selector to select samples for all ports, either no samples were selected or a file with *Complete* status was selected.

Action: Select samples that do not have a *Complete* status.

2575 **The application is running an analysis of which the instrument is unaware. The analysis will be restarted and canceled to ensure that the instrument is in a safe state.**

Cause: The analyzer was power cycled or rebooted during an analysis.

Action: Allow the termination to complete and run the analysis again.

2576 **The instrument [n] is not calibrated.**

Cause: The analyzer application is in the process of initializing the analyzer and is unable to locate the calibration files.

Action A: Click **OK**. Go to **Unit [n] > Calibration > Load from File**, then select a file containing calibration data.

Action B: Click **OK**. Close the application, then use the *Setup* program to reinstall calibration files.

2577 **The python directory is missing or some of its contents have been removed.**

Cause: When using *Advanced* reports, a necessary component is missing.

Action: Re-install the application.

2578 **Not enough available resources. Application will have reduced functionality. Reduce the number of open files or report windows.**

Cause: There is not enough memory available to open the requested window.

Action: Close any unnecessary applications, then try the operation again.

2579 **The selected file has a status that is not compatible with the operation requested.**

Cause: The selected sample file cannot be used for the selected operation. For example, a sample file with a *Complete* status cannot be used for analysis.

Action: Select a different sample file.

2584 **The application encountered an unexpected error and will be halted.**

Cause: : Files necessary for the application are missing or have been corrupted.

Action: Re-install application.

2585 **Please re-install to make use of Windows libraries for file management. The fol-**

Missing libraries are missing: [n]

Cause: This message is triggered on application start up if any of the library files used by an application do not exist on disk.

Action: Add the library into the libraries folder.

2586 Sample file [n] has no pressure table entries.**2587 Sample file [n] has no dose increment table entries.**

Cause: Trying to analyze a sample file with no pressure entries in *Analysis Conditions*.

Action: Either edit the *Analysis Conditions* and enter the pressure points to be used for analysis, or select a sample file that already has the pressure points entered.

2588 Sample file [n] is a [n] file and can not be analyzed on this instrument.

Cause: The specified sample file is from another Micromeritics application which is not usable with this application.

Action: Select a different sample file.

2589 Sample file [n] can not be analyzed on this instrument.

Cause: The file specified for analysis cannot be used.

Action: Select a different file.

2590 The default sample file [n] cannot be selected.**2590 The default sample file [n] can not be overwritten.****2590 An error occurred accessing file or directory [n].**

Cause: The default sample file (default method) cannot be used in this operation (e.g., as a sample file for analysis).

Action: Select a different sample file from the data directory.

2591 Cannot open problem diagnostic data save file: [n].

Cause: The file necessary for *Unit [n] > Diagnostics > Schedule Diagnostic Test* (\Hardware\probdia.dat) could not be read. It is likely corrupted.

Action: Exit the application. Delete or rename the file mentioned in the error message and restart the application. A new file will be created.

2592 The selected file has an extension that is not supported by this operation.

Cause: The selected file does not have a supported file extension.

Action: Open the adsorptive properties file. Open the .FPI file selector and select another file with a supported file extension.

2593 **Warning: The selected file uses Unicode (UTF-8 or UTF-16LE) encoding with non-ASCII characters.**

2594 **The selected file uses Unicode [UTF-16BE or UTF-32) encoding and could not be read.**

Cause: The *Advanced* report is not saved in ASCII format, which is required by Python.

Action: Edit the file and save it in ASCII (ANSI) format.

2595 **The selected file is too large (maximum allowed size is [n]).**

Cause: The *Advanced* report is too large.

Action: Edit the file and reduce the size.

2596 **Can not find a file selected for analysis: [n]**

Cause: A sample file for a currently running analysis was moved or deleted while the application was closed.

Action: The analysis may not complete correctly. If this occurs, close the application and cycle power on the analyzer using the analyzer power switch. Contact a Micromeritics service representative if this error message continues.

2607 **Default sample file [n] is invalid. Try deleting it and restarting the application.**

Cause: The default sample file is invalid.

Action: Delete the default sample file from the applications directory and restart the application.

2608 **Default sample file [n] is not writable. Program will terminate.**

Cause: The default sample file has been set to read only.

Action: Disable the read only setting from the default sample file or delete the default sample file from the applications directory and restart the application.

2609 **Preview data has been truncated due to length. Consider exporting directly to a printer or to a text, PDF, or XML file.**

Cause: A preview report was produced with a data set that is too large to display.

Action: Export or print the report to see all the data.

2610 Failed to create directory [n].

Cause: Bad permissions for selected directory.

Action: Ensure that permissions on the parent directory of the selected folder match the permissions of the installation directory. If they do, contact your Micromeritics service representative.

2611 Browsing outside of the configured location is not allowed.

Cause: File browsing is limited to the application directory and custom repository location if one was specified during installation.

Action: Restrict file browsing to the allowed locations. No user should be able to browse outside the installation directory or custom repository location when using the application.

2612 File [n] cannot be created by [n]. It is a restricted file type.

2613 File [n] cannot be modified by [n]. It is a restricted file type.

Cause: Confirm Analyst accounts cannot open, create, or modify parameter files.

Action: Use a Confirm Developer account to open, create, or modify parameter files.

2614 File [n] cannot be modified by [n]. An error in the audit trail occurred. Changes cannot be saved.

Cause: The Confirm sample audit trail could not be written, preventing changes to the sample file.

Action: Contact your Micromeritics Service Representative.

2616 [n] must belong to the analyst or developer group in order to run this application. Program will terminate.

Cause: The user attempting to log on to the Confirm application must be a member of either the Confirm developer group or the Confirm analyst group.

Action: In Windows Users and Groups, verify that the user belongs to one of the groups.

2617 [n] has been locked out. Please contact your system administrator.

Cause: The user has attempted to log in to the Confirm application too many times and the user account has been locked.

Action: Contact your system administrator to unlock the user account.

2618 **Application will be terminated due to an error [n] during a password update for [n]. Please contact the system administrator to change the password manually.**

2619 **Failed to automatically update password for [n]. Please contact the system administrator to change the password manually.**

Cause: An unsuccessful attempt was made to update the password for the specified user.

Action: Contact the system administrator to change the password manually in Windows Users and Groups.

2620 **Too many environment variables in use. Reduce the number of Windows environment variables.**

Cause: An attempt was made to use too many Windows environment variables.

Action: Ensure the total number of characters in the Windows environment does not exceed 5120 characters.

2621 **Large environment variables found. Remove any environment variables exceeding 2048 characters.**

Cause: Environment variables are too large.

Action: Ensure there are no long environment variables.

2622 **Critical error [n] encountered. The application may not work as expected.**

Cause: An attempt was made to run the Confirm application in a Windows environment other than Windows 10 Professional or Windows 10 Enterprise or higher.

Action: Run the Confirm application in a Windows 10 Professional or Windows 10 Enterprise or higher environment only. If you are already running the required operating system, contact your Micromeritics service representative.

2623 **Application will be terminated due to an error [n] in acquiring a windows cryptographic context.**

Cause: An attempt was made to acquire a Windows cryptographic context and the process failed.

Action: Contact your Micromeritics Service Representative.

2624 Application will be terminated due to an error [n] in generating a random password.

Cause: The Confirm application failed to generate a random password for the specified user.

Action: Manually create a password in Windows Users and Groups.

2625 Application will be terminated due to an error [n] in acquiring a windows cryptographic service context.

Cause: An attempt was made to acquire a Windows cryptographic service context and the process failed.

Action: Contact your Micromeritics Service Representative.

2626 Could not retrieve logged in username or domain.

Cause: The installation process failed.

Action: Reinstall the Confirm application by using the default installer options. Contact a Micromeritics service representative if this error message continues.

2627 Error opening communications port for the balance.

Cause: Serial communications with a balance could not be established.

Action: Ensure the cable is attached the balance and the computer. Ensure the balance is powered on and that the settings in **Options > Configure Balance** are correct

2628 Incorrect password for [n].

Cause: An incorrect password was entered when an attempt was made to start an analysis.

Action: Re-enter the correct password.

2629 The application controller [n] must not belong to either the analyst or developer group in order to run this application. Program will terminate.

Cause: The application controller was placed in the analyst or developer group (or both).

Action: Remove the application controller from the group(s).

2630 Failed to get user account information [n].

2631 Failed to acquire credentials handle [n].

2632 Failed to initialize security context [n].

- 2633** Failed to complete authorizing token [n].
- 2634** Unsupported operation to authorize token [n].
- 2635** Failed to accept security context [n].
- 2636** Cannot log in as a guest. [n]
- 2637** Application will be terminated due to an error [n] in decryption.
- 2638** Error handling new user credentials [n].
- 2639** Error handling password expiration [n].
- 2640** Timeout error [n].
- 2644** Application will be terminated due to an error [n] in initializing the controller process.

Cause: Refer to the error code provided.

Action: Contact your Micromeritics Service Representative.

- 2640** Timeout error [n].

Cause: Refer to the error code provided.

Action: Contact your Micromeritics Service Representative.

- 2644** Application will be terminated due to an error [n] in initializing the controller process.

Cause: Refer to the error code provided.

Action: Contact your Micromeritics Service Representative.

- 2649** The models cannot be located in the models folder. Re-install the software.

Cause: The models could not be located. They may have been inadvertently deleted or moved.

Action: Reinstall the application.

- 4601** File [n] is not a mass spectrometer data file.

Cause: The selected file does not contain mass spectrometer data in a supported format.

Action: Export the data using the analysis application for the mass spectrometer to a supported text format then import the file into the Micromeritics application.

- 4602** The file does not contain any mass spectrometer data or is missing required

fields. Nothing was imported.

Cause: The selected file does not contain mass spectrometer data.

Action: When exporting the data using the analysis application for the mass spectrometer, ensure that the signals of interest are selected for export. Export the data to a supported text format then import the file into the Micromeritics application.

4603 This instrument has no TCD calibration files to edit.

Cause: No TCD calibrations associated with this analyzer were found.

Action: Go to **Unit [n] > TCD Calibration** to create a new TCD calibrations for this analyzer.

4604 This sample does not contain an experiment which can be used in a [n] calibration.

Cause: The sample file selected in the calibration editor does not have valid peaks for the type of calibration.

Action: Select a sample file that contains the appropriate experiment type.

4605 The calibration data for experiment [n] may already be loaded. You may delete duplicates after loading.

Cause: Before reloading the peak information for a sample file into the calibration editor, all previously loaded peaks must first be deleted.

Action: Delete all peaks from the calibration editor, then try loading the sample file again.

4606 The file [n] was not created with this instrument or does not contain calibration data.

Cause: The selected sample file contains data collected on an analyzer different from the analyzer associated with the current calibration editor.

Action: Select a sample file containing calibration data collected on the current analyzer.

4607 The calibration data file [n] was not created from an imported mass spec file.

Cause: The selected sample file does not contain mass spectrometer data.

Action: Select a sample file containing mass spectrometer calibration data collected.

4608 Unable to update the adsorptive property file. Ensure that the selected adsorptive is not opened for editing.

Cause: The selected adsorptive property file could not be written.

Action: Ensure that the adsorptive property file for the gas selected in the gas flow constant calibration wizard is not currently open in an adsorptive property editor.

4609 Unexpected I/O error accessing data for an experiment in sample [n].

Cause: A sample file for a running analysis could not be opened with exclusive write access.

Action: Ensure that no applications other than the analyzer application has access to the sample file during an analysis.

4610 Cannot append to an experiment in sample [n]. Maximum size may be exceeded.

Cause: Collected data could not be written to a sample file for a running analysis. This may be due to the maximum allowed file size for the operating system.

Action: Reduce the amount of data collected during analysis by reducing the data collection rate or reducing the number of experiments in the analysis conditions task list.

4611 At least two peaks are required to determine first order kinetics.

Cause: An experiment selected in this report contains less than the two peaks required by the report.

Action: Identify the peaks in the experiment before reporting or deselect the experiment in the report options before generating the report.

4612 Ambient temperature should be > 10 °C.

Cause: An experiment selected in this report contains an entered ambient temperature for below the minimum allowed for the report.

Action: Correct the ambient temperature in the experiment using the calibration selection editor that is accessed through the experiment peak editor.

4613 Average syringe area should be > 0.

Cause: There is no peak data for the loop calibration.

Action: Identify the injection peaks by creating baselines for these peaks in the experiment peak editor.

4614 At least 6 peaks are required for a loop calibration; the peak table contains [n].

Cause: The number of peaks for the loop calibration is less than six.

Action: Using the experiment peak editor, create baselines for the injection peaks. There must be at least six injections and corresponding peaks to calculate the loop volume.

4615 No experiments were selected for inclusion in this report.

Cause: All experiments were deselected for this report.

Action: Select the experiments to report in the selected experiments list in the report options for this report.

4616 At least two experiments are needed for this report.

Cause: The report options for this report do not include the selection of at least two experiments.

Action: Select at least two experiments to report in the selected experiments list in the report options for this report.

4617 The data requested on this report are not available.

Cause: The data required for this report, such as the identified peaks, are not contained within any of the selected experiments.

Action A: Use the experiment peak editor to create baselines for the experiment peaks.

Action B: Ensure that only experiments containing data for the configured report are selected in the selected experiments list in the report options for this report.

Action C: Ensure that only data contained within the experiment is selected for reporting in the report options for this report.

4618 There are no peaks available for this experiment.

Cause: There are no identified peaks within one or more selected experiments for this report.

Action: Use the experiment peak editor to create baselines for the experiment peaks.

4619 TCD calibration is required for the calculations of this report.

Cause: A TCD calibration has not been applied to one or more selected experiments for this report.

Action: Select a TCD calibration for the selected experiments using the calibration selec-

tion editor that is accessed through the experiment peak editor.

4620 [n] does not contain concentration data.

Cause: A TCD calibration has not been applied to one or more selected experiments for this report.

Action: Select a TCD calibration for the selected experiments using the calibration selection editor that is accessed through the experiment peak editor.

4621 New steps cannot be inserted in the synopsis at any point that precedes the step that is currently being executed.

Cause: The analysis has already progressed past the point at which an attempt was made to insert a step; therefore the step would not be performed.

Action: Insert the new analysis step after the step or repeat loop that is currently being executed.

4622 No new steps may be inserted. Analysis is complete.

Cause: The analysis for this sample file has completed. A step cannot be inserted into a sample file whose analysis is complete.

Action: Create a new sample file and then click **Replace** to copy the analysis conditions from the completed file, then add the step to the new sample file.

4623 Warning: For the chosen total flow rate and blending proportions, the carrier and/or loop MFC will be set to a flow rate less than 10 cm³/min. Blending performance may not be acceptable. Do you wish to keep these settings?

Cause: A request for the blending of the carrier and loop gases was made, but the proportions of the gasses and the flow rate of the mixture chosen caused at least one of the MFCs to be set to a rate less than 10 cm³/min. The accuracy of the MFC at such low flow rates may be unacceptable for some applications.

Action: Click **Yes** if reduced accuracy is acceptable or click **No** and change the proportions or total flow rate.

4624 [n] has calibrations applied and cannot be used to construct new calibrations until the applied calibrations are removed.

Cause: Attempting to create a signal calibration with data that has already been calibrated.

Action A: Remove the applied calibration in the peak editor so that the signal may be used to generate a new signal calibration.

Action B: Select a file that does not already have calibration applied.

4625 No active metal with a percent of sample mass greater than zero was found.

Cause: The metal table for the sample does not contain an active metal with a non-zero percent of sample, which is required by the pulse chemisorption report.

Action: Open the sample description tab and click **Active Metals** to open the metal table editor. Set a percent of sample mass for one or more metals and run the report again.

4626 Selecting sample files with data collected by different instruments is not allowed. Only the first sample file (S/N: [n]) will be loaded.

Cause: Sample files from different instruments were selected as sources for a signal calibration. Signal calibrations are only valid when constructed from analyses with a single instrument.

Action: Select sample files with analyses performed on the same instrument when constructing a signal calibration from multiple sample files.

4627 No valid sample files were selected.

Cause: A signal calibration could not be constructed due to the selection of incompatible sample files.

Action: Construct signal calibrations using sample files collected on the same instrument with the same analysis experiment types.

4629 [n] interpolated data is too large.

Cause: Interpolation of data between record blocks exceeds the available memory.

Action: Retake the data with shorter time intervals between end and start record script steps.

4631 An adsorptive properties file is needed for [n].

Cause: Vapor pressure cannot be calculated because there is no adsorptive properties file for the specified vapor.

Action: Ensure that the adsorptive properties library includes the folder with .ADP files.

4632 Vapor pressure cannot be calculated for [n] at [n].

Cause: The reflux temperature is outside the range of temperatures for which vapor pres-

sure can be calculated.

Action A: Ensure that the reflux temperature in the analysis conditions is appropriate for the selected vapor.

Action B: If using the Anoine equation, check that the minimum and maximum temperatures are set correctly.

4633 Step [n]. Vapor is not supported by this model.

Cause: The indicated experiment step was set to use vapor flow/pulse type analysis, which is not supported by the current model selection. Go to *View conditions* for [model].

Action: Change the model selection back to *AutoChem III (2930)* and change the analysis type in the indicated experiment step to one supported by the preferred model before changing back.

4634 Step [n]. Preparation gas must be set to None.

Cause: Attempting to change the model selection to one that corresponds to an instrument which does not have the preparation MFC hardware. The indicated step sets a preparation gas. Go to *View conditions* for [model].

Action: Change the model selection back to *AutoChem III (2930)* and change the preparation gas selection to *none* before changing back.

4635 Step [n]. Blend port 2 and blend port 3 are not supported by this model.

Cause: Attempting to change the model selection to one that corresponds to an instrument which does not have the multiple analysis ports (only Port 1). The indicated step is attempting to set parameters on Port 2 and/or Port 3. Go to *View conditions* for [model].

Action: Change the model selection back to *AutoChem HT (2830)* and change the Port selection to *Port 1*, deselect controls specific to Port 2/3, or delete the step if it will not be required before changing back.

4636 Step [n]. Physisorption experiments are not supported by this model.

Cause: The indicated experiment step was set to use physisorption type analysis, which is not supported by the current model selection. Go to *View conditions* for [model].

Action: : Change the model selection to either *AutoChem III (2930)* or *MicroChem (2730)* and change the analysis type in the indicated experiment step to one supported by the desired model before changing back.

4637 Step [n]. Hardware for preparation MFC not supported by this model. AutoChem III only.

4637 Step [n]. Hardware for reference MFC not supported by this model. AutoChem III and AutoChem HT only.

4637 Step [n]. Hardware for carrier port 2 and port 3 MFCs not supported by this model. AutoChem HT only.

Cause: The step indicated is attempting to Zero measurements from MFC hardware that is not present on the selected model. Go to *View conditions* for [model].

Action A: Change the model selection to the supporting instrument type (indicated in the message) and modify the step settings so that they do not conflict with the preferred model hardware, then change the selection back to confirm the error has been cleared.

Action B: Delete the indicated step and insert a new one with the selections appropriate for the model hardware.

4638 Step [n]. Signal calibration directory could not be created for [n]. Analyses cannot be performed.

Cause: The unit calibration directory could not be created.

Action: Confirm that the current user profile has permissions for editing the hardware directory contents. Restart the software and/or try reinstalling the software such that the current user has access. If error persists contact your micromeritics representative.

4639 Interval [n] is not defined in the breakthrough editor.

Cause: A breakthrough interval was selected for a plot report, but the specified interval is not present.

Action A: Add intervals in the breakthrough editor.

Action B: Select a different editor or deselect *show interval* in the plot report editor.

6209 File cannot be opened for writing. It is already in use.

Cause: An attempt was made to access a file that is in use by some other part of the application.

Action: Close the window or application which is currently using the file and try again.

6219 Warning, the instrument [n] is uncalibrated.

Cause: During initialization, the analyzer determined that no calibration data exists for this

analyzer.

Action: Before performing any analysis or experiment, load the calibration information from the factory supplied media.

6221 [n] has an invalid status/calibration file and cannot be initialized.

Cause: The status/calibration file, which tracks the status of the analyzer, cannot be read by the application.

Action: Reinstall the application to ensure that the file is installed correctly.

6222 The Vapor Generator for the instrument [n] is uncalibrated.

Cause: During initialization, the analyzer determined that no calibration data exists for this analyzer.

Action: Before performing any analysis or experiment, load the calibration information from the factory supplied media.

6224 [n] has an invalid status/calibration file and cannot be initialized.

Cause: The application cannot read the file that tracks the analyzer's status.

Action: Reinstall the application to ensure the file is set up correctly.

6225 No Vapor Generator calibration is available on [n].

6226 No instrument calibration is available on [n].

Cause: The unit could not be initialized because no factory supplied calibration file has been loaded.

Action: Load the factory-supplied calibration file.

6231 The sample has an invalid status and cannot be used for this analysis.

Cause: Only sample files with a status of No Analysis can be used for analysis. The selected sample file has a status other than No Analysis.

Action: Select a sample file with a status of No Analysis.

6232 Warning: The furnace is open, and sample/furnace temperature is above ambient. Do you want to continue?

Cause: The sample's temperature (or that of the furnace) was above ambient, and/or the furnace was open when an attempt was made to start the analysis.

Action: If the furnace/temperature condition is correct, click **Yes**. Otherwise, click **No**, correct the problem, then restart the analysis.

6233 Warning: The furnace is open. Do you want to continue?

Cause A: An analysis was started with the furnace door open or the furnace is not connected to the analyzer.

Action A: If the furnace condition is correct, click **Yes**. Otherwise click **No**, correct the problem, and restart the analysis.

Cause B: An analysis was started with the furnace door closed, but the interlock switch inside the furnace has failed.

Action B: Contact your Micromeritics Service Representative.

6234 Warning: The sample/furnace temperature is above ambient. Do you want to continue?

Cause: The sample's temperature (or that of the furnace) was above ambient when the analysis was started.

Action: If the sample's temperature is correct, click **Yes**. Otherwise, click **No**, correct the problem, and restart the analysis.

6264 Warning: The CryoCooler needs to be re-filled. Do you want to continue?

Cause: An attempt was made to start an analysis with a low level of liquid in the CryoCooler.

Action: Click **Yes** to proceed with the analysis if the CryoCooler is not required. Click **No**, refill the CryoCooler, and restart the analysis if the CryoCooler is needed for this analysis.

6267 Inter-application message cannot be delivered. Select Continue to resume analysis.

6268 Analysis paused. An inter-application message cannot be delivered.

6269 Analysis paused. An inter-application message failed. The Receiver was busy.

6270 Analysis paused. An inter-application message failed. The Receiver refused the request.

6271 Analysis paused. An inter-application message failed for an unknown reason.

Cause A: A DDE operation was not properly executed.

Action A: Ensure that the other application is loaded and in a state which supports DDE oper-

ations. If the problem persists, exit all applications and Windows, then restart the applications.

Cause B: The DDE command was not specified correctly.

Action B: Review the DDE server application manual for the specific command and enter it correctly in the DDE command step. If the problem persists, exit all applications and Windows, then restart the applications.

6275 **Hardware error code [n]. Rotary valve failed to respond where [n] is cold trap, sample, loop, back pressure, or vapor. Heat zone error.**

Cause: An internal error has occurred.

Action: Record the contents of the error message. Contact your Micromeritics Service Representative.

6400 **Warning. The flow sensed by the Carrier Flow sensor is below 5 cm³/min.**

6401 **Warning. The flow sensed by the Reference Flow sensor is below 5 cm³/min.**

6402 **Warning. The flow of the carrier Mass Flow Controller is below 5 cm³/min.**

6403 **Warning. The flow of the reference Mass Flow Controller is below 5 cm³/min.**

6404 **Warning. The flow of the loop Mass Flow Controller is below 5 cm³/min.**

6405 **Warning. The flow of the carrier Mass Flow Controller differs from the target by 10% or more.**

6406 **Warning. The flow of the reference Mass Flow Controller differs from the target by 10% or more.**

6407 **Warning. The flow of the loop Mass Flow Controller differs from the target by 10% or more.**

Cause: The gas flow in the gas plumbing referenced in the error message is inadequate. Either it is blocked, or the gas source (its associated valves and gas supplies) is not activated.

Action: Ensure that the referenced Mass Flow Controller is set for a flow greater than 5 cm³/min., that one of its valves is open, and that the gas supply to the open valve is operating correctly.

6408 **Warning. The detector heat zone has been reporting an invalid temperature (reading) for one minute.**

6409 **Warning. The loop heat zone has been reporting an invalid temperature (reading) for one minute.**

6410 **Warning. The analysis heat zone has been reporting an invalid temperature**

(reading) for one minute.

6411 **Warning. The cold trap heat zone has been reporting an invalid temperature (reading) for one minute.**

6412 **Warning. The vapor valve heat zone has been reporting an invalid temperature (reading) for one minute.**

6413 **Warning. The vapor flask heat zone has been reporting an invalid temperature (reading) for one minute.**

6414 **Warning. The vapor reflux heat zone has been reporting an invalid temperature (reading) for one minute.**

Cause A: Heater cable is loose or disconnected.

Action A: Connect the heater cable.

Cause B: There is a failure in the hardware or electronics

Action B: Establish an Idle state in the analyzer, power OFF the analyzer, then power it back ON. Allow the application to initialize. If the problem recurs after the application has been active for about one minute, contact your Micromeritics Service Representative.

6415 **Warning. The furnace thermocouple is not connected.**

Cause A: The cable connecting the furnace thermocouple to the front panel of the analyzer has been disconnected.

Action A: Connect the cable (the connector is shaped so that it can only go in one way).

Cause B: There is a failure in the hardware or electronics.

Action B: Contact your Micromeritics Service Representative.

6416 **Warning. The sample thermocouple is not connected or operating properly.**

Cause: Either the sample thermocouple is not connected or it is not operating properly.

Action: Remove the top cover of the analyzer and inspect the sample thermocouple cable to insure that it is properly connected. If everything appears correct, substitute a different thermocouple. Contact a Micromeritics service representative if this error message continues.

6417 **Warning. System pressure has been above the allowed limit for more than 10 seconds.**

6418 **Warning. System pressure has been above the tolerance level for more than one minute.**

Cause: Gas flow is restricted at some point in the system.

Action: Examine the analyzer schematic to determine the current flow path from the carrier Mass Flow Controller, then examine the analyzer's components that correspond to the flow path. Use manual control to identify the location of the restriction. A typical source of blockage is a sample that is too tightly packed in the tube. Clear the restriction, if possible. Contact your Micromeritics service representative if necessary.

6419 Warning. Manual Control of the furnace is not supported when the Sample Temperature system is active.

Cause: A manual control operation was attempted during an automatic analysis. The current step involves the sample temperature system.

Action: Do not attempt manual operations during an analysis. To alter the sample temperature system manually during the analysis, suspend the analysis, perform the operation, then resume the analysis. (The current step is skipped and the analysis is resumed on the next step.)

6420 Warning. Manual Control of a flow-related item is not supported when the Flow Management system is active.

Cause: A manual control operation was attempted during an automatic analysis. The current step involves a flow-related item.

Action: Do not attempt manual operations during an analysis. To alter a flow-related item manually during the analysis, suspend the analysis, perform the operation, then resume the analysis. (The current step is skipped and the analysis is resumed on the next step.)

6421 Warning. Manual Control of a TCD related item is not supported when the Signal Management system is active.

Cause: A attempt at a manual control operation was made during an automatic analysis. The current step involves a TCD-related item.

Action: Do not attempt manual operations during an analysis. To alter a TCD related item manually during the analysis, suspend the analysis, perform the operation, then resume the analysis. (The current step is skipped and the analysis is resumed on the next step.)

6422 Warning. Manual Control of a heat zone is not supported when the Signal Management system is active.

Cause: A manual control operation was attempted during an automatic analysis. The current step involves a heat zone.

Action: Do not attempt manual operations during an analysis. To alter the heat zone manually during the analysis, suspend the analysis, perform the operation, then resume the analysis. (The current step is skipped and the analysis is resumed on the next step.)

6423 Error. Operation suspended. The flow sensed by the Carrier Flow sensor is below 5 cm³/min.

6424 Error. Operation suspended. The flow sensed by the Reference Flow sensor is below 5 cm³/min.

6425 Error. Operation suspended. The flow of the carrier Mass Flow Controller is below 5 cm³/min.

6426 Error. Operation suspended. The flow of the reference Mass Flow Controller is below 5 cm³/min.

6427 Error. Operation suspended. The flow of the prep Mass Flow Controller differs from the target by 10% or more.

6428 Error. Operation suspended. The flow of the carrier Mass Flow Controller differs from the target by 10% or more.

6429 Error. Operation suspended. The flow of the reference Mass Flow Controller differs from the target by 10% or more.

6430 Error. Operation suspended. The flow of the loop Mass Flow Controller differs from the target by 10% or more.

Cause: The gas flow in the gas plumbing referenced in the error message is not adequate. Either it is blocked, or the gas source (a Mass Flow Controller, its associated valves, and gas supplies) is not activated.

Action: Ensure that the analysis Mass Flow Controller is set for a flow greater than 5 cm³/min., that one of its valves is open, and that the gas supply to the open valve is operating correctly. If the problem is corrected, resume the analysis; otherwise, cancel it. Before resuming the analysis, re-establish the TCD temperature using manual control. After enabling manual control, click on the detector heat zone and set the temperature to the correct value.

6431 Error. Operation suspended. The detector heat zone has been reporting an invalid temperature (reading) for one minute.

6432 Error. Operation suspended. The loop heat zone has been reporting an invalid temperature (reading) for one minute.

6433 Error. Operation suspended. The analysis heat zone has been reporting an invalid temperature (reading) for one minute.

6434 Error. Operation suspended. The cold trap heat zone has been reporting an

- invalid temperature (reading) for one minute.
- 6435** Error. Operation suspended. The vapor valve heat zone has been reporting an invalid temperature (reading) for one minute.
- 6436** Error. Operation suspended. The vapor flask heat zone has been reporting an invalid temperature for one minute.
- 6437** Error. Operation suspended. The vapor reflux heat zone has been reporting an invalid temperature (reading) for one minute.
- Cause:* Heater cable is loose or disconnected.
- Action A:* Connect the heater cable.
- Cause B:* A failure has occurred in the hardware or electronics.
- Action B:* Establish an Idle state in the analyzer, power OFF the analyzer, then power it back ON. Restart the application. If the problem recurs after the application has been active for about one minute, contact your Micromeritics Service Representative. If the problem is corrected, resume the analysis; otherwise, cancel it. Before resuming the analysis, re-establish the TCD temperature using manual control. After enabling manual control, click on the detector heat zone and set the temperature to the correct value.
- Cause C:* The heat zone is calibrated incorrectly.
- Action C:* Contact your Micromeritics Service Representative.
- 6438** Error. Operation suspended. The furnace thermocouple is not connected.
- Cause A:* The cable connecting the furnace thermocouple to the front panel of the analyzer has been disconnected.
- Action A:* Connect the cable (the connector is shaped so that it cannot be improperly inserted).
- Cause B:* There is a failure in the hardware or electronics.
- Action B:* Contact your Micromeritics Service Representative. If the problem is corrected, either resume or cancel the analysis. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.
- 6439** Error. Operation suspended. This sample thermocouple is not connected or operating properly.
- Cause:* Either the sample thermocouple is improperly connected or it is not functioning properly.
- Action:* Remove the top cover of the analyzer and inspect the sample thermocouple cable

to ensure that it is properly connected. If the connect appears correct, substitute a different thermocouple. Contact a Micromeritics service representative if this error message continues. If the problem is corrected, either resume or cancel the analysis. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.

6440 Error. Operation canceled. System pressure has been above the allowed limit for more than 10 seconds.

Cause: Gas flow has been restricted at some point in the system.

Action: Examine the analyzer schematic display to determine the current flow path from the carrier Mass Flow Controller, then examine the analyzer's components that correspond to the flow path. Use manual control to identify the location of the restriction. A typical source of blockage is a sample that is too tightly packed in the tube. Clear the restriction, if possible. Contact your Micromeritics service representative if necessary. If the problem is corrected, resume the analysis; otherwise, cancel it. Before resuming the analysis, re-establish the TCD temperature using manual control. After enabling manual control, click on the detector heat zone and set the temperature to the correct value

6441 Error. Operation suspended. An invalid instruction has been encountered code [n] at [n] in experiment [n] after step [n].

Cause: An application error has occurred.

Action: Record the entire text of this error message and the name of the sample file. Contact your Micromeritics Service Representative.

6442 Error. Operation suspended. After 200 attempts, the instrument has failed to detect two consecutive peaks of equal area.

6443 Error. Operation suspended. After 200 attempts, the instrument has failed to detect two consecutive peaks of zero area.

Cause: The sample tube contains little or no sample, or the sample is not reacting with the analysis gas.

Action: If the problem is corrected, either resume or cancel the analysis. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.

6444 Error. Operation suspended. A signal wait time-out has occurred.

Cause: The time allowed for a Wait step expired before the condition(s) of the Wait step

were met.

Action: Examine the analysis conditions for this analysis to determine if sufficient time was allowed for the conditions of this Wait step to be met. Determine if the analysis should proceed. Either resume the analysis or cancel it. Before resuming the analysis, re-establish the TCD temperature using manual control. After enabling manual control, click on the detector heat zone and set the temperature to the correct value.

6445 Error. Operation suspended. A gas flow operation time-out has occurred where [n] is preparation reference, carrier, or loop.

Cause: The time allowed for a sample temperature operation to be complete expired before the target temperature was reached. The control application calculates a time limit based upon the ramp rate and the difference between the current temperature and the target temperature

Action: Examine the current sample temperature. If it is acceptable for the purposes of the current analysis, resume the analysis; otherwise, cancel it. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.

6446 Error. Operation suspended. A gas [n] flow operation time-out has occurred where [n] is preparation, reference, carrier, or loop.

Cause: Stable gas flow in a Mass Flow Controller was not achieved within two minutes.

Action: Ensure that the gas supply for the open valve associated with the Mass Flow Controller is set to the correct pressure. Use manual control to detect the cause of the problem. If the problem is corrected, either resume or cancel the analysis. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.

6447 Error. Operation suspended. An invalid parameter has been encountered code [n].

6448 Error. Operation suspended. The requested script ID = [n] is not located in the instrument.

6449 Error. Operation suspended. There is insufficient room for the script ID = [n] error code [n].

Cause: An application error has occurred.

Action: Record the entire text of this error message. Send a copy of the sample file being analyzed to your Micromeritics Service Representative.

6450 Warning. The requested gas flow is not possible because all inlet valves for this MFC area are closed.

Cause: A Manual control operation to set a gas flow in a Mass Flow Controller was requested, but all associated valves are closed.

Action: Use manual control to open the required gas valve, then repeat the Set Flow Rate operation.

6451 Error. Operation suspended. Communications with the furnace controller were unsuccessful due to a time-out.

Cause: Internal communications between the application and the furnace controller were unsuccessful. Several retries were attempted.

Action: Make a note of the code number included in the error message. Contact your Micromeritics Service Representative.

6452 Error. Operation suspended. Sample temperature ramping/control has failed because the actual sample temperature differs from the temperature control element by more than 100 °C.

Cause: The sample temperature has differed significantly from that of the furnace for at least 10 minutes.

Action: Ensure that the sample thermocouple is properly installed and that the furnace is closed. If the problem is corrected, resume the analysis; otherwise, cancel it. Before resuming the analysis, re-establish the TCD temperature using manual control. After enabling manual control, click on the detector heat zone and set the temperature to the correct value.

6453 Error. Operation suspended. An operation was requested that is not currently valid.

Cause: A application error has occurred

Action: Record the entire text of this error message and the name of the sample file. Contact your Micromeritics Service Representative.

6454 Error. Operation suspended. The flow control interface board (channel [n]) was not ready within the allowed time.

6455 Error. Operation suspended. The heat zones interface board (channel [n]) was not ready within the allowed time.

Cause: A hardware error has occurred.

Action: Record the entire text of this error message and the name of the sample file.

Contact your Micromeritics Service Representative.

- 6456** Error. Operation suspended. A heat zone code [n] did not reach its target of [n] (current temperature = [n]) within the allowed time of [n] minutes, where [n] is detector, loop, sample, cold trap, back pressure, vapor, flask, or reflux.
- 6457** Error. Operation suspended. The furnace did not reach a temperature between [n] and [n] in the allowed time of [n] minutes.
- 6458** Error. Operation suspended. Sample temperature equilibration is not allowed because sample temperature control is not active code [n].

Cause: A hardware error has occurred.

Action: Record the entire text of this error message and the name of the sample file. Contact your Micromeritics Service Representative. If the problem is corrected, either resume or cancel the analysis. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.

- 6463** Warning. The Cold Trap rotary valve did not operate correctly.
- 6464** Warning. The Preparation rotary valve did not operate correctly.
- 6465** Warning. The Inject rotary valve did not operate correctly.
- 6466** Warning. The Vapor Generator rotary valve did not operate correctly.

Cause: An attempt to manually control the specified valve resulted in incorrect operation, possibly due to a mechanical problem.

If valve referenced in message is:	It is also known as:
Preparation rotary valve	Analysis valve
Inject rotary valve	Loop valve

Action: Try the operation again 2-3 times. If the problem persists, lower the temperature of the associated heat zone and then try the operation again. If this is not successful, exit the application and then power OFF the analyzer. After a few seconds, power ON the analyzer and restart the application. The valve should be re-initialized. Ensure that the valve moves freely using manual control. Contact a Micromeritics service representative if this error message continues.

- 6467** Warning. The KwikCool option is not installed.

Cause: An attempt to control manually the KwikCool option failed because the KwikCool option was not detected at the time the control was attempted. If analysis is

resumed before the problem is corrected, the current step will NOT be completed.

Action: Confirm that the KwikCool cable is properly connected to the analyzer. It is recommended that the analyzer is powered OFF when the KwikCool connector is attached to the analyzer (or detach it). Use manual control to attempt the KwikCool operation. If the problem persists, continue operations without using the KwikCool, or try exiting the application and then powering OFF the analyzer. After a few seconds, power ON the analyzer and then restart the application. Contact a Micromeritics service representative if this error message continues.

6468 Error. Operation suspended. The Cold Trap rotary valve did not operate correctly. Manually toggle the valve to restore proper operation.

6469 Error. Operation suspended. The Preparation rotary valve did not operate correctly. Manually toggle the valve to restore proper operation.

6470 Error. Operation suspended. The Inject rotary valve did not operate correctly. Manually toggle the valve to restore proper operation.

6471 Error. Operation suspended. The Vapor Generator rotary valve did not operate correctly. Manually toggle the valve to restore proper operation.

Cause: An attempt to control the specified valve during an analysis resulted in an incorrect operation, possibly due to a mechanical problem. If analysis is resumed before the problem is corrected, the current step will NOT be completed.

If valve referenced in message is:

Preparation rotary valve

Inject rotary valve

It is also known as:

Analysis valve

Loop valve

Action: Use manual control to attempt to operate the valve. If the problem persists, lower the temperature of the associated heat zone and then try the operation again. If this is not successful, exit the application and then power OFF the analyzer. After a few seconds, power ON the analyzer and restart the application. The valve should be re-initialized. Ensure that the valve moves freely using manual control. Contact a Micromeritics service representative if this error message continues.

6472 Error. Operation suspended. The KwikCool option is not installed.

Cause: An attempt to operate the KwikCool option during an analysis failed because the KwikCool option was not detected at the time the operation was attempted. If the analysis is resumed before the problem is corrected, the analysis will continue without the KwikCool.

Action A: Confirm that the KwikCool cable is properly connected to the analyzer. Power OFF the analyzer when attaching (or detaching) the KwikCool.

Action B: Use manual control to attempt the KwikCool operation that was requested during the analysis. If this is not successful, exit the application and then power OFF the analyzer. After a few seconds, power ON the analyzer and then restart the application. Restart the analysis. Contact a Micromeritics service representative if this error message continues.

6473 Warning. The CryoCooler option is not installed.

Cause: An attempt was made to change the CryoCooler's settings but the CryoCooler was not detected.

Action A: Ensure that the CryoCooler is physically connected to the analyzer and that the retaining screws on the connector are securely tightened.

Action B: Exit the application, power OFF the analyzer, then restart the application. Contact a Micromeritics service representative if this error message continues.

6474 Warning. The CryoCooler is almost empty. Temperature control may not be stable.

Cause: The liquid level in the CryoCooler is low. It may be impossible to achieve subambient temperatures unless cryogen is added.

Action: If the current analysis requires subambient temperatures, suspend the analysis, refill the CryoCooler with liquid nitrogen, then resume the analysis.

6475 Warning. Manual control of the CryoCooler is not supported when the Sample Temperature system is active.

Cause: An attempt was made to change the CryoCooler's settings while a temperature ramp was in progress.

Action: Wait until the temperature ramp is finished before adjusting the CryoCooler's settings.

6476 Warning. Calibration of the detector heat zone failed. The previous calibration will be used.

6477 Warning. Calibration of the loop heat zone failed. The previous calibration will be used.

6478 Warning. Calibration of the analysis heat zone failed. The previous calibration will be used.

6479 Warning. Calibration of the cold trap heat zone failed. The previous calibration will be used.

6480 Warning. Calibration of the vapor valve heat zone failed. The previous cal-

ibration will be used.

6481 **Warning. Calibration of the vapor flask heat zone failed. The previous calibration will be used.**

6482 **Warning. Calibration of the vapor reflux heat zone failed. The previous calibration will be used.**

Cause A: The measured temperature when the high calibration value was entered was less than the measured temperature when the low calibration value was entered.

Action A: Repeat the calibration, ensuring that the entered temperatures are accurate. If calibrating the vapor flask zone, ensure that the heating mantle is attached to the analyzer properly.

Cause B: The temperature is being measured improperly by the analyzer.

Action B: Contact a Micromeritics service representative if this error message continues.

6483 **Error. Analysis cannot proceed. System pressure has been above the allowed limit for more than 10 seconds.**

Cause: Gas flow has been restricted at some point in the system.

Action: Examine the analyzer schematic to determine the current flow path from the carrier Mass Flow Controller, then examine the analyzer's components that correspond to the flow path. Use manual control to identify the location of the restriction. A typical source of blockage is a sample that is too tightly packed in the tube. Clear the restriction, if possible. Contact your Micromeritics service representative if necessary. If the problem is corrected, either resume or cancel the analysis. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.

6485 **Instrument is connected to a Eurotherm furnace.**

Cause: A Eurotherm furnace is erroneously plugged into the analyzer that has a new style CPU card.

Action: Contact your Micromeritics Service Representative.