

3FLEXTM 3500

SURFACE CHARACTERIZATION ANALYZER



micromeritics®

ERROR MESSAGES

May 2023

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.

2001 Error generating PDF file for report.

Cause: Software was not correctly installed.

Action: Contact your Micromeritics Service Representative.

2002 Error printing PDF file for report.

Cause A: Software was not correctly installed.

Action A: Contact your Micromeritics Service Representative.

Cause B: Network printer connected to instrument is not set up properly.

Action B: Contact your Micromeritics Service Representative.

Cause C: Unexpected network issue occurred.

Action C: Contact your Micromeritics Service Representative.

2003 2003- Error generating plot for PDF report.

Cause: Software was not correctly installed.

Action: Contact your Micromeritics Service Representative.

2010 Error accessing file [n]s, error code = [n].

Cause A: Media may be damaged.

Action A: Clean the media drive. If this does not eliminate the problem, attempt operation using a backup copy of the file.

Cause B: Hard disk may be damaged.

Action B: Contact your Micromeritics Service Representative.

Cause C: An application error occurred when the file was accessed.

Action C: Contact your Micromeritics Service Representative.

Cause D: The file name specified contains one or more invalid characters.

Action D: Enter a valid file name. Do not use characters such as * or ?. Refer to the operating system manual.

- 2011** **Cannot register file.**
- 2012** **Subset not found.**
- 2013** **Seek within file failed.**
- 2014** **Bad header in subset file.**
- 2015** **Subset owner denied access.**
- 2016** **Not a valid file format.**
- 2017** **Subset wrote the wrong amount of data.**
- 2018** **Error reading data.**
- 2019** **Error writing data.**

Cause: An unexpected error occurred when trying to access a data file.

Action: Contact your Micromeritics Service Representative.

2020 **Error copying sequential data segment.**

Cause: An internal processing and/or hardware error occurred while accessing a portion of a sample file

Action: Confirm that the media being accessed does not contain errors. Contact your Micromeritics Service Representative.

2030 **Error logger cannot be initialized. Error code [n]. Program will terminate.**

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

Action: Contact your Micromeritics Service Representative.

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 **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.

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 Micro-

meritics 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 reques-

ted.

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 following 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\probdiag.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.

2615 [n] cannot belong to both the analyst and developer group in order to run this application. Program will terminate.

Cause: The user attempting to log on to the Confirm application cannot be a member of both the Confirm developer group and the Confirm analyst group.

Action: In Windows Users and Groups, verify that the user does not belong to both groups.

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 to 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.

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.

4002 Thermal Transpiration correction had no effect.

Cause: The *Thermal transpiration correction* option was selected on the *Report Options* window; however, the correction did not change any pressure by more than one percent.

Action: Deselect this option to disable this message. This correction is only meaningful for very low pressures

4003 Error obtaining relative pressures. Check [n] setting.

4004 Error computing quantity adsorbed.

Cause: An internal processing and/or hardware error occurred during report generation.

Action: Contact your Micromeritics Service Representative.

4005 Pressures were not smoothed. Not enough pressures below 0.10 [n].

Cause: The *Smooth pressures below 0.10 P/P₀* option was selected on the *Report Options* window. There must be at least 10 pressures within this range for smoothing to occur.

Action: Deselect this option to disable this message.

4014 File [n] is not a valid file for conversion.

Cause: The file selected for conversion is not a valid file.

Action: Select only files that have been created by the proper program.

4015 Error creating export file for sample [n].

Cause: A file error occurred during creation of an export output file.

Action: The output file name may be invalid. Ensure that the target directory exists and is not full or write protected. The target disk drive may be damaged or inoperative. Verify that other files may be created on the same drive. Contact your Micromeritics Service Representative.

4016 Sample [n] has no data for export.

Cause: The file selected for export has a status of *No Analysis*. No export file will be created.

Action: Select a file which contains analysis data.

4017 **Damage to the instrument will result if the sample [n] has not been manually evacuated. Have you evacuated the sample?**

4020 **Disabling this option may damage the instrument. Are you sure that the sample should not be backfilled?**

Cause: *Backfill sample at start of analysis* was not selected on the *Sample Backfill Options* window. The sample tube is normally at atmospheric pressure when an analysis is started; it must be backfilled before the analysis begins to prevent sample material from being drawn into the manifold.

Action: To manually evacuate the sample prior to the start of the analysis, click **Yes**. Otherwise, click **No**, go to the *Sample Backfill Options* window, then select *Backfill sample at start of analysis*.

4025 **There is no [n] attached to the unit.**

Cause: The gas shown in the error message is specified in *Analysis Conditions* but is not connected to the unit.

Action: Go to **Unit [n] > Unit Configuration**, then enter the gas.

4026 **Cannot calculate Dubinin-Astakhov: bad least squares data.**

Cause: Less than two selected data points are within the fitted pressure range.

Action: Edit the selection of data points on the Dubinin interactive editor or on the Dubinin Pressures window.

4028 **Dubinin calculations cannot be performed because the affinity coefficient of the analysis gas is zero.**

Cause: Dubinin values could not be calculated because the affinity coefficient of the analysis gas is zero.

Action: Access the *Dubinin Report Adsorptive* options in the sample file, then enter an appropriate value for the analysis gas.

4029 **At least two fitted data points are needed for Alpha-S calculations.**

Cause: Fewer than two data points fall within the selected Alpha-S range.

Action: Edit either the calculation pressure in the fitted Alpha-S range, or use a different reference curve.

4031 Not enough points with a relative pressure in the range [n].

Cause: Fewer than two data points selected for the Dubinin report fall within the selected relative pressure range.

Action: Edit the calculation pressure range or the fitted relative pressure range.

4033 Not enough points to generate Dubinin Tabular Report.

Cause: There are fewer than two valid data points available for the Dubinin tabular reports.

Action: At least two micropore pressures must be selected for inclusion in the Dubinin report. Edit the selection of data points on the Dubinin interactive editor or on the Dubinin Pressures window.

4034 Fewer than 2 points available for Dubinin calculations.

Cause: There are fewer than two valid data points available for Dubinin reports in one of the sample files selected for overlaying.

Action: At least two micropore pressures must be selected for inclusion in the Dubinin report. Edit the selection of data points on the Dubinin interactive editor or on the Dubinin Pressures window.

4035 Cannot calculate optimized Astakhov exponent.

Cause: There are fewer than two valid data points in the relative pressure range specified. Astakhov reports will not be produced.

Action: At least two pressures must be selected for inclusion in the Astakhov report. Edit the selection of data points on the Astakhov interactive editor or on the Astakhov Pressures window.

4036 Fewer than 2 points available for Horvath-Kawazoe calculations.

Cause: At least two data points must be selected for inclusion in the Horvath-Kawazoe analysis. No report will be produced.

Action: Edit the selection of points on the Horvath-Kawazoe interactive editor or on the Horvath-Kawazoe window.

4038 Fewer than 2 points available for the Langmuir Qm computation.

Cause: The *Cheng/Yang correction* to the Horvath-Kawazoe equation requires the value of the monolayer volume as calculated from the Langmuir equation. The isotherm must include at least two points above 0.02 relative pressure for the Langmuir equation to be applied.

Action: The analysis will be performed without the Cheng/Yang correction. Deselect *Apply Cheng/Yang correction* on the *Horvath-Kawazoe Report Options* window to prevent this message from appearing on future reports.

4039 The isotherm does not meet the constraints of the Cheng/Yang assumption.

Cause: The *Cheng/Yang correction* to the Horvath-Kawazoe equation requires the value of the monolayer volume as calculated from the Langmuir equation. The isotherm does not correlate to the Langmuir assumption with a coefficient of 0.98 or more. The correction is not applicable to this isotherm or to the range of the data points selected.

Action A: The analysis will be performed without the *Cheng/Yang correction*. Deselect *Apply Cheng/Yang correction* on the *Horvath-Kawazoe Report Options* window to prevent this message from appearing on future reports.

Action B: Generate the Langmuir report for the same data points selected for the Horvath-Kawazoe report. If the Langmuir correlation coefficient can be brought above 0.98 by removing some points at high relative pressure, remove them, then reproduce the Horvath-Kawazoe reports.

4040 The value of Qm computed from the Langmuir equation is too low.

Cause: The *Cheng/Yang correction* to the Horvath-Kawazoe equation requires the value of the monolayer volume as calculated from the Langmuir equation. The computed value is less than the volume adsorbed at the largest relative pressure included in the analysis. The correction is not applicable to this isotherm or to the range of the data points selected.

Action: The analysis will be performed and the *Cheng/Yang correction* will be applied to all points with a volume adsorbed less than the value of V_m . The pore size will not be calculated for data points with an invalid volume adsorbed. Deselect *Apply Cheng/Yang correction* on the *Horvath-Kawazoe Report Options* window to clear this message.

4041 The Cheng-Yang correction is inappropriate for some [n].

Cause: The Cheng/Yang correction is usually inappropriate for any P/P_0 above the isotherm knee. In some instances, the computed pore sizes may decrease above the knee. While it is possible to include these relative pressures (usually above 0.1 P/P_0) in the analysis, the computed pore sizes for these pressures are usually meaningless.

Action: Change the data points selected for the Horvath-Kawazoe report to include only relative pressures at or below the knee of the isotherm, or change the Horvath-Kawazoe report options so that the Cheng/Yang correction is not applied.

- 4044** **Points in the Langmuir report pressure table lie outside the collected data.**
- 4045** **Points in the report pressure table lie outside the collected data.**
Cause: Calculation pressure range is not being used. More than one of the report pressure table points is above the range of the collected data and more than one is below.
Action: Change the report pressure table to be more consistent with the collected data.
- 4046** **[*n*] could not be opened for reading.**
Cause: A thickness curve file could not be opened.
Action: If the problem persists, restart the computer, then optionally perform a media integrity check.
- 4047** **Warning: An error occurred while reading [*n*].**
Cause: An error happened during a read operation of a thickness curve file.
Action: If the problem persists, restart the computer, then optionally perform a media integrity check.
- 4052** **Fewer than two points are selected for this report.**
- 4052** **Fewer than three points provided to the interpolation table.**
- 4052** **Fewer than three points are selected for this report.**
Cause: At least two (or three) points are required for the BET calculations.
Action: Edit the calculation range in the BET report.
- 4053** **At least two data points must be selected for t-Plot calculations.**
Cause: At least two points are required for the t-Plot calculations.
Action: Edit the calculation range for the t-Plot report.
- 4054** **Fewer than two data points are inside the fitted thickness range.**
Cause: At least two points must be within the fitted thickness range for the *t*-Plot calculations.
Action A: Edit the calculation range for the *t*-Plot report.
Action B: Edit the fitted thickness range in the *t*-Plot report editor.
- 4055** **A positive BET surface area was not calculated. Please check your BET Report.**

4056 A positive Langmuir surface area was not calculated. Please check your Langmuir report.

Cause: Fewer than two points were assigned to the requested surface area calculation in the collected data table.

Action A: Assign more points to the surface area calculation.

Action B: Select a different surface area in the *t*-Plot report editor.

4057 At least two data points are needed for Freundlich calculations.

4058 At least two data points are needed for Temkin calculations.

Cause: Less than two data points have been selected for the specified report; at least two are required.

Action: Edit the selection of points on the report's interactive editor or on the *Pressures* window for the specified report.

4059 Fewer than 2 points available for MP-Method calculations.

Cause: At least two points are required for the MP-Method calculations.

Action: Edit the calculation range for the MP-Method report.

4060 Sample [n] contains no data points.

Cause: An attempt was made to save a sample without collected data as a *t*-curve or Alpha-S curve.

Action: Repeat the *Save As t-curve* or *Save As Alpha-S* operation after opening a sample that has collected data.

4061 The t-curve must contain at least 2 points.

Cause: At least two points are required in a thickness curve definition.

Action: Edit the thickness curve.

4062 Error during report preparation.

Cause: An internal processing error has occurred.

Action: Contact your Micromeritics Service Representative.

4063 No subreports selected.

Cause: A report (e.g. BJH) comprised of several reports has no subreport selected.

Action: Edit the report in *Report Options* and select at least one subreport.

4067 No data points are within the range of pressures in the reference isotherm.

Cause: There are no collected data points within the range of pressures in the reference isotherm.

Action: Select data points in the range of the reference isotherm, or select a more appropriate reference isotherm.

4068 No points were selected for the f-Ratio report.

Cause: The *f-Ratio* report does not have any points selected.

Action: Edit the selection of data points on the f-Ratio window.

4070 Unable to load deconvolution model [n].

Cause: The list of available models was corrupted; therefore, the model selected could not be loaded for the deconvolution.

Action: Exit the application. Reinstall the application, then try again.

4071 The selected pressures points do not form a valid set for deconvolution.

Cause: The data points selected for analysis do not contain enough information to allow a DFT data reduction.

Action: At least two points with strictly increasing pressures and volumes adsorbed are required for a DFT Plus data reduction. Edit the selection of data points on the DFT interactive editor or on the DFT Pressures window.

4072 The range of pressures selected is too small to deconvolute using this model.

Cause: A null result was found using the selected model.

Action: At least two points with strictly increasing pressures and volumes adsorbed are required for a DFT Plus data reduction. Edit the selection of data points on the DFT interactive editor or on the DFT Pressures window.

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.

4077 Cannot get surface area for [n].

Cause: The Isotherm report for the named overlay file has *Per gram* selected for the *Volume Adsorbed*, and the Isotherm report for the primary file has a surface area option selected for the *Volume Adsorbed*.

Action A: Edit the Isotherm report for the named overlay file, then select a surface area option for *Volume Adsorbed*.

Action B: Click **Overlays** on the *Report Options* window of the primary file, then remove the named overlay file from the list.

4078 Slope and Y-Intercept cannot be determined from the selected points.

Cause: The Langmuir report cannot be generated from the selected points.

Action: Edit the calculation pressure range in the Langmuir report pressure window.

4080 The compressibility factor table has [n] pressure entries. Only [n] are allowed.

Cause: The fluid property information file has too many rows of compressibility information.

Action: Delete rows for pressures that are not likely to be encountered in the analysis.

4090 The compressibility factor table for [n] is empty.

Cause: The fluid property information in the file selected for analysis does not have any compressibility factors.

Action: Update the adsorptive properties files using a different fluid properties file.

4115 The [n] gas in sample file [n] does not match any gas in the unit.

Cause: The selected gas for the P_0 and T for the *Analysis Conditions* is not one of the gases connected to the analyzer. Go to **Unit [n] > Unit Configuration** and verify the gas.

Action: Edit the *Analysis Conditions* P_0 and T and change the gas to one which is connected to the analyzer.

4117 The [n] gas in sample file [n] does not match any gas in the unit.

Cause: The adsorptive selected for the analysis is not one of the gases connected to the analyzer.

Action A: Go to **Unit [n] > Unit Configuration** and verify the gas.

Action B: Edit the *Analysis Conditions* and change the adsorptive to one which is connected to the analyzer

4127 The compressibility factor table has [n] temperature entries. Only [n] are allowed.

Cause: The fluid property information file has too many columns of compressibility information.

Action: Delete columns for temperatures that are not likely to be encountered in the analysis.

4128 Error reading from [n].

Cause: There was an error importing data from the Clipboard using copy/paste.

Action: Retry the operation.

4143 NIST REFPROP not available.

Cause: The AppDir/refprop.dll file or the AppDir/fluids file has been renamed or removed from the application directory.

Action: Reinstall the analysis application.

4144 Horvath-Kawazoe calculations failed. The bath temperature is zero.

Cause: The sample analysis temperature could not be calculated (and returns zero), or the analysis temperature was entered as zero.

Action: Check the sample's *Po* and *T* options.

4145 Preparations failed in primary data.

Cause: The data preparation failed for a report for either the selected sample file or an overlay used by the report.

Action: If this message references an overlay file, the report may still be printed for the selected sample file.

4146 Fewer than 2 points available for [n] calculations.

Cause: Calculations failed for overlays in the BJH report.

Action: Continue printing the report for the primary data.

4147 No [n] reports. Fewer than 2 points meet [n] criteria.

Cause: Not enough data points are found with pressures and volumes Adsorbed monotonically increasing (adsorption) or monotonically decreasing (desorption) for the BJH report.

Action: Select a different sample file.

4148 Calculations failed for [n] overlay data.**4148 Calculations failed for [n] primary data.**

Cause: Calculations failed for overlays in the BJH report.

Action: Continue printing the report for the primary data.

4149 No valid points resulted from [n] calculations.

Cause: The BJH calculation resulted in no pore size diameters

Action: The isotherm passed to the calculation had invalid data or not enough data.

4150 No points within the specified [n] pore size interval.

Cause: A BJH min/max pore diameter range selection which is too narrow.

Action: Make the pore diameter range wider.

4151 Isotherm calculation called with no points available.

Cause: Not enough valid data points are available for the Isotherm report.

Action: Select a different sample file.

4152 The adsorbate property factor must be positive nonzero.

Cause: The adsorbate property factor (APF) was not selected or is zero.

Action: Select the appropriate adsorptive in the BJH report options and ensure the APF value is entered.

4153 The density conversion factor must be positive nonzero.

Cause: The density conversion factor (DCF) for the analysis gas was not entered, is zero, or the gas is non-condensing at the analysis temperature.

Action: If the gas is non-condensing, then the BJH report is not-applicable. If the analyzer has the .FPI file option, ensure that the appropriate gas (.fpi file) is selected. Other-

wise, ensure the *Adsorptive Properties* on the *Analysis Conditions* tab lists a positive DCF.

4154 [n] could not be read.

Cause: The file is corrupt or not a sample file.

Action: Select a different file.

4155 [n] does not have physisorption data.

Cause: Only physisorption data can be combined. The named file does not have any data, or has data that is not from a physisorption analysis.

Action: Select only files from physisorption analyses.

4156 All files must use the same target pressure type: absolute or relative.

Cause: At least one file has data taken with a target pressure type that differs from the others.

Action: Select files that have the pressure type: all relative or all absolute.

4157 The selected data sets do not have enough overlap in the [n] branch.

4158 The selected data sets do not include a full adsorption/desorption isotherm with no cycles.

Cause: Data sets must have overlapping pressure ranges so they can be matched. One point in the range of another data set is typically sufficient. More points in the overlap range allows better matching.

Action: Select files with overlapping pressure ranges.

4159 The scanning cycles do not stay within the bounds of the full isotherm.

Cause: Scanning data must be bounded by the full isotherm. This error is shown if any quantity adsorbed in a scanning adsorption branch falls below the full adsorption isotherm, or if any quantity adsorbed in a scanning desorption branch exceeds the full desorption isotherm, by more than 5%. This check is done after matching the scanning data to the full isotherm.

Action: Ensure that the scanning data are from the same sample and taken using the same conditions as the full isotherm. Check the data for outliers.

4160 HPVA sample conversion failed. File [n] is missing or unreadable.

Cause: An attempt was made to convert an HPVA sample (.H1sh file extension) into the MicroActive (.SMP file extension) sample format. The specified file was unavailable or could not be read successfully.

Action: Ensure the file's permissions allow reading of the file and the file is not open in another application. If the error persists, contact a Particulate Systems representative for advice.

4161 HPVA sample conversion failed. File [n] is version [n]. Conversion is currently possible for version 5 and greater.

Cause: An attempt was made to convert an HPVA sample (.H1sh file extension) into the MicroActive (.SMP file extension) sample format. The specified file is an early version of the HPVA data which is not yet supported by MicroActive.

Action: MicroActive cannot be used with this older format sample data. Contact a Particulate Systems representative for advice on how to analyze this data.

4162 HPVA sample conversion failed. The adsorptive [n] could not be found in the fluids directory.

Cause: An attempt was made to convert an HPVA sample (.H1sh file extension) into the MicroActive (.SMP file extension) sample format. The specified analysis gas does not have a corresponding fluid file in the applications fluids directory. A NIST REFPROP fluid file (.FLD file extension) is required by MicroActive to obtain gas properties for HPVA samples

Action: Ensure that files in the fluids directory have not been removed or renamed. MicroActive can be reinstalled to restore the directory contents.

4164 Unexpected I/O error accessing data for real time scan data 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.

4200 An error occurred while loading the application control information. Data entry cannot be performed. (Code [n]).

Cause: An error occurred accessing the control information disk file required by this application.

Action: The disk drive may have failed or be corrupt. Run diagnostics on the disk drive.

- 4400** **The computer does not have the communications port specified for the SmartPrep(s). Cannot initialize.**
Cause: The communications port associated with this unit was not valid.
Action: Run the setup program and set up the unit on a valid port.
- 4401** **The communications port specified for the SmartPrep(s) is already in use. Cannot initialize.**
Cause: The communications port associated with this analyzer is in use by some other program in the system.
Action: Close the other program to release the port. Restart the analysis application.
- 4402** **The communications port specified for the SmartPrep(s) cannot be accessed. Cannot initialize.**
- 4403** **Cannot communicate with SmartPrep Unit [n].**
Cause: The communications port associated with this unit was not valid.
Action: Run the setup program and set up the unit on a valid port.
- 4404** **The application version of the SmartPrep Unit [n] is invalid.**
Cause: The controller application running on the designated analyzer is invalid.
Action: Use the SmartPrep setup program to download the proper controller application to the analyzer, or if unavailable, contact a Micromeritics service representative.
- 4405** **Fatal communications error with SmartPrep Units[n].**
Cause: There was a fatal error in the serial communications between the application and the SmartPrep Instrument Controller. All displays for that SmartPrep will be closed.
Action: Ensure that the SmartPrep is properly chained to the computer on the communications port configured in the *Setup* program. Stop and restart the application. Contact a Micromeritics service representative if this error message continues.
- 4406** **A maximum of [n] files may be selected.**
Cause: Too many files were selected for the SmartPrep start degas operation.
Action: Retry the operation with the proper number of files (1 per port).
- 4407** **Error searching for installed Smart VacPreps. The registry could not be read.**

Cause: The application was not installed properly.

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

4408 The [n] in [n] already has Smart VacPrep S/N [n]. The Smart VacPrep must be removed from the [n] before it can be added.

Cause: The Smart VacPrep was already installed for another application / unit.

Action: Remove the Smart VacPrep from the installed unit before adding it to the preferred unit.

4409 A free IP address on the same subnet as [n] could not be found.

Cause: All IP addresses on the network for the Ethernet card specified during installation are in use by other Micromeritics applications on this computer.

Action A: Uninstall unused Micromeritics applications.

Action B: Configure a different Ethernet card for use by the application using the application installer.

4410 The .INI file could not be updated with configuration for Smart VacPrep S/N [n].

Cause: The application .INI file is opened by another application and could not be updated.

Action: Close all open applications and add the Smart VacPrep again using the Smart VacPrep menu.

4411 Error dosing.

Cause: The backfill timed out.

Action: Ensure there is gas available and the pressure regulator is set to the appropriate pressure. Also ensure that the gas supply regulator shutoff valve is open.

4412 Error calibrating the servo.

Cause: Calibration results are out of range.

Action: Follow standard calibration procedures and try again. Contact a Micromeritics service representative if this error message continues.

4413 Error overheating on port [n]. Current = [n] [n], Target = [n] [n], Limit = [n] [n].

Cause: The temperature of the indicated mantle exceeded the maximum allowed value.

Action: Ensure the power and thermocouple connectors for the mantle are properly installed. Contact a Micromeritics service representative if this error message continues.

4414 Error thermocouple unplugged on port [n]. Target = [n] [n].

Cause: The thermocouple is unplugged or has malfunctioned.

Action: Ensure the thermocouple is plugged in. Contact a Micromeritics service representative if this error message continues.

4415 Degas transducer zero calibration failed. Current Offset = [n] counts, Current Pressure = [n] [n], New Offset = [n] counts, Nominal = [n] counts.

Cause: The pressure transducer offset exceeds the recommended limit.

Action: Ensure that the vacuum pump is on. Repeat the pressure offset calibration. Contact a Micromeritics service representative if this error message continues.

4416 Degas transducer scale calibration failed. Reference = [n] [n], Current = [n] [n], New Scale = [n] [n] count, Nominal = [n] [n] count.

4417 Degas vacuum gauge low point calibration failed. Reference = [n] [n], Current = [n] counts.

Cause: The transducer offset calibration was rejected.

Action: Contact your Micromeritics Service Representative.

4418 Degas vacuum gauge high point calibration failed. Reference = [n] [n], Current = [n] counts.

Cause: The vacuum gauge calibration was rejected.

Action: Contact your Micromeritics Service Representative.

4419 Error reading servo DAC.

Cause: There is a problem with the servo DAC timing out.

Action: Contact your Micromeritics Service Representative.

4420 Communications error.

Cause: The application failed to connect to the Smart VacPrep.

Action: Ensure the unit is powered and properly connected to the network specified during

installation. Check the power cable, power switch, and Ethernet cable, then reconnect to the Smart VacPrep either through the Smart VacPrep menu for this analyzer or by restarting the application. Contact a Micromeritics service representative if this error message continues

4421 Smart VacPrep S/N [n] is busy and could not be removed.

Cause: The Smart VacPrep cannot be removed because it is currently performing an operation.

Action: Wait until the Smart VacPrep completes the current operation and try again.

4423 The sample [n] is already selected on port [n].

Cause: The selected sample file is already selected for use on a different port.

Action: Select another sample file for this port.

4424 The file [n] on port [n] could not be opened. Check if the sample file is already in use for editing or analysis.

Cause: The selected sample file is already open by this or another application.

Action A: The selected sample file is damaged.

Action B: Select another sample file.

4425 The sample [n] on port [n] has an invalid status and cannot be used for degassing.

Cause: The status of the file is not consistent with the current operation.

Action: Select a sample file that has not been used for an analysis. Only sample files with a status of *No Analysis* or *Prepared* may be selected.

4426 Port [n] is currently in use. Operation cannot be started.

Cause: The current operation cannot be completed because the port is already in use.

Action: Wait for port to terminate operation or perform the desired operation on an unused port.

4427 Smart VacPrep S/N [n] is already in use.

Cause: The Smart VacPrep is configured for use by another Micromeritics application.

Action: Remove the specified Smart VacPrep from other Micromeritics applications before

using it with this application.

4428 Error no response on port [n]. Current = [n] [n], Target = [n] [n].

Cause: The Smart VacPrep cannot be removed because it is currently performing an operation.

Action: Wait until the Smart VacPrep completes the current operation and try again.

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 selection 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 pressure 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 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.

4800 You cannot delete the only evacuation task between two tasks with different gases.

Cause: An evacuation task is required between two tasks with different gases in the preparation options in-situ-activation task list of a chemical adsorption sample file.

Action: Enter an evacuation task between the two tasks.

4801 The gas selected for this task is different from the gases selected for the neighboring tasks. An evacuation task must be added to add this task. Add evacuation and proceed?

Cause: A new task was entered and the gas does not match the gas in the previous task. Mixing gases may be dangerous.

Action: Click **Yes** to automatically insert the evacuation task. Click **No** to continue editing the task options

4802 Adding this leak test will require a preceding evacuation. Do you wish to add both tasks?

Cause: By inserting or deleting a task in the *Selected Tasks* list on the Analysis Conditions window, a leak test task was entered without a preceding evacuation task. The leak test will fail if the sample pressure exceeds 0.5 mmHg.

Action: Click **Yes** to evacuate the sample between the two tasks. Click **No** to exclude evacuation.

4803 The maximum allowed number of tasks is selected. Delete some tasks before proceeding.

Cause: An attempt was made to insert more than twenty tasks.

Action: No more than twenty tasks may be specified in one sample file. If additional preparation steps are required, use two sample files. The first sample file should contain only preparation tasks; the second file should contain any remaining preparation tasks and an analysis task.

4804 The [n] task must have a preceding evacuation.

Cause: An evacuation task must precede a leak test task in the preparation options in-situ-activation task list of a chemical adsorption sample file.

Action: Click **OK** to insert both tasks. Otherwise click **Cancel**.

4810 **[n cannot be produced: No data points were selected for inclusion in the calculations.**

Cause: Fewer than two points were selected for the Difference or Sinfelt report calculation.

Action: Select two or more data points for the line fit.

4811 **Line fit could not be done for primary data.**

4811 **Line fit could not be done for repeat data.**

4811 **Line fit could not be done for difference data.**

4811 **Fewer than two repeat points are available.**

4811 **Fewer than two difference points are available.**

Cause: Fewer than two primary/repeat/difference points were passed to the line fit calculation.

Action: Select two or more data points for the line fit calculations.

4820 **[n not compatible with the MFC seals. Kalrez seals are recommended for use with this fluid.**

Cause: Kalrez seals are indicated for the fluid specified in a flow task in the preparation options in-situ-activation task list of a chemical adsorption sample file.

Action: Contact your Micromeritics Service Representative.

4821 **[n is in the liquid phase at ambient temperature and pressure and cannot be used with this MFC.**

Cause: Fluids selected for flow tasks in the preparation options in-situ-activation task list of a chemical adsorption sample file must be in the gas phase at ambient temperature and pressure.

Action: Select another fluid for the flow task.

4830 **Calculations failed for first analysis data.**

4831 **Calculations failed for repeat analysis data.**

4832 **Calculations failed for differential data.**

Cause: Calculations for the primary/repeat/difference data set failed. Not enough points were supplied to the line-fit, or the line-fit could not be successfully computed.

Action: Ensure that an appropriate selection of data has been made for the calculation.

4200 **An error occurred while loading the application control information. Data entry cannot be performed. (Code [n]).**

Cause: An error occurred accessing the control information disk file required by this application.

Action: The disk drive may have failed or be corrupt. Run diagnostics on the disk drive.

6001 **The instrument [n] is not calibrated.**

Cause: The previously saved calibration file could not be read.

Action: Go to **Unit [n] > Calibration > Load from File** to restore a previously saved calibration file.

6004 **When dosing from the Psat tube, [n] must be entered or calculated.**

Cause: The dosing method selected requires the entered or calculated P_0 option.

Action: Check the analysis adsorptive properties and the P_0 and T options in the analysis conditions of the sample file.

6005 **Analysis with krypton requires a 10 mmHg transducer. Port [n] does not have a 10 mmHg transducer.**

Cause: Krypton was selected as the adsorptive for a port which does not support it.

Action: Select a different sample file for this port or change the adsorptive in the *Analysis Conditions* of the sample selected for the port.

6006 **The pressure table has points that may be below port [n] minimum reading of [n]. Points outside the range of the transducers will be skipped. Do you want to continue with the analysis?**

Cause: Pressures specified in the *Analysis Conditions* are below the minimum values allowed for the port.

Action: Click **Yes** to continue the analysis, omitting the below-minimum points or click **No** and edit the pressures in the *Analysis Conditions*.

6007 **Warning: The shield is not in place.**

Cause: The Dewar shield was not detected when the analysis was started.

Action: For best performance, install the Dewar shield before starting an analysis.

6008 **Warning: The selected Psat gas [n] is the same as the adsorptive. The Po option has been changed to "Measure Po in the Po tube for each isotherm point".**

Cause: When Psat gas matches adsorptive gas, the Po and Temperature option *Measure Psat of the gas specified below for each isotherm point. Calculate Po of the adsorptive from the measured Psat* is functionally equivalent to the option *Measure Po in the Po tube for each isotherm point*. Therefore the option is automatically changed with a warning.

Action: Only select the *Measure Psat* option when Psat gas does not match adsorptive gas.

6009 **The expected saturation pressure [n] exceeds the maximum pressure for this port [n].**

Cause: The *Analysis Conditions* specify pressures which will produce a saturation pressure greater than can be measured by the selected port.

Action: Edit the pressures in the *Analysis Conditions*.

6010 **Warning: The entered saturation pressure [n] does not agree with the expected saturation pressure [n] at [n].**

Cause: The entered saturation pressure does not agree with the expected saturation pressure at the analysis temperature.

Action: Verify the value of the saturation pressure in the P_0 and T options in the analysis conditions of the sample file

6011 **The target pressure [n] exceeds the entered [n].**

Cause: Target pressures exceed the entered saturation pressure.

Action A: Correct the entered saturation pressure.

Action B: Remove targets that are above the saturation pressure.

6012 **The target pressure [n] exceeds the expected saturation pressure [n] at [n].**

Cause: Target pressures exceed the saturation pressure determined from the fluid property information.

Action: Remove targets that are above the saturation pressure.

6013 **Warning: The [n] option "Determine [n] from pressure measured over the dosing source" requires that the dosing source be at the same temperature as the sample. The analysis temperature option "Calculate the analysis temperature**

from [n] or Psat" is recommended.

Cause A: This option assumes the dosing source and sample are at the same temperature, which means calculating the analysis temperature is preferred over entering it directly

Action A: In the *Po and Temperature Options* window, change the *Analysis Temperature Option* to *Calculate the analysis temperature from Po or Psat*.

Action B: In the *Po and Temperature Options* window, set the analysis temperature to within 2 degrees of the vapor source temperature in the adsorptive properties. This small adjustment is allowed to account for systematic temperature differences.

6014 The fluid property information does not have enough data near [n] to calculate the saturation pressure.

Cause: When absolute pressure dosing is used, the pressure table is checked to ensure that the saturation pressure of the adsorptive is not exceeded. This error indicates that the saturation pressure could not be determined because the sample temperature is not in the range of the saturation pressures or sublimation pressures in the fluid properties. This check is skipped if the sample temperature is above the critical temperature of the adsorptive.

Action: Ensure that the entered sample temperature is correct. Ensure that the correct adsorptive is selected and that it has the displayed name of the fluid properties is correct. Contact your service representative if there is a problem with the adsorptive properties.

6015 [n] is not a sample information file.

Cause: The file selected as a sample file is not valid.

Action: Select a different file.

6017 There is no Nitrogen attached to the unit.

Cause: Nitrogen is required for an analysis but Nitrogen is not one of the gases known to be connected to the analyzer. Go to **Unit [n] > Unit Configuration** to verify the selected gas.

Action: Go to **Unit [n] > Unit Configuration** and specify the valve which has Nitrogen connected.

6018 Warning: The compressibility factor table for [n] is empty.

Cause: The fluid property information in the file selected for analysis does not have any compressibility factors.

Action: This is just a warning; the analysis will proceed. It is OK to cancel the analysis and update the fluid property information.

6019 A source for the selected backfill gas could not be found.

Cause: The backfill gas specified in **Analysis Conditions > Preparation** is not one of the gasses known to be connected to the analyzer. Go to **Unit [n] > Unit Configuration** and verify the selected gas.

Action: Go to **Unit [n] > Unit Configuration** and verify the valve where Nitrogen is connected.

6020 Step [n]. Pulse and loop calibration experiments are not supported by this hardware configuration.

Cause: Pulse and loop calibration experiments require an analyzer equipped with an injection loop. The injection loop was not detected as an installed option for this analyzer.

Action: Perform the analysis on an analyzer equipped with the injection loop option. If the analyzer is equipped with this option and this error occurs, contact your Micromeritics service representative.

6021 Step [n]. Invalid selection for current hardware configuration.

Cause: The dynamic chemical analysis conditions contain a gas flow or valve step that is unsupported by the current hardware option level.

Action: Verify all gas flow and valve steps. If necessary, delete and recreate all gas flow and valve steps in the analysis conditions task list.

6022 Step [n]. Hardware configuration does not support loop valve operations.

Cause: Loop valve operations require an analyzer equipped with an injection loop valve. The injection loop was not detected as an installed option for this analyzer.

Action: Perform the analysis on an analyzer equipped with the injection loop option or set the loop valve to the Fill position in the valve actuation step. If the analyzer is equipped with this option and this error occurs, contact your Micromeritics service representative.

6023 Step [n]. Loop gas selection must be set to None.

Cause: Loop flow operations require an analyzer equipped with an injection loop mass flow controller. The injection loop was not detected as an installed option for this analyzer.

Action: Perform the analysis on an analyzer equipped with the injection loop option or set the loop gas to None in the gas configuration for this step. If the analyzer is equipped with this option and this error occurs, contact your Micromeritics service representative.

6024 Instrument does not support dynamic chemi mode.

Cause: A dynamic chemisorption analysis was started but the dynamic chemisorption option was not detected as an installed option for this analyzer.

Action: Perform the analysis on an analyzer equipped with the dynamic chemisorption option. If the analyzer is equipped with this option and this error occurs, contact your Micromeritics service representative.

6025 Step [n]. Carrier gas [n] does not match any gas in the unit.

6026 Step [n]. Loop gas [n] does not match any gas in the unit.

Cause: An unconfigured gas is selected for use by the specified mass flow controller.

Action: If the gas is connected to the analyzer, go to **Unit [n] > Unit Configuration** and add the gas to the gas selections.

If the gas is not connected to the analyzer, either connect the gas and add the gas to the gas selections in the unit configuration or change the gas selected for use by the specified mass flow controller for this step.

6027 Step [n]. A carrier gas must be selected and flowing at least 10 sccm before the detector can be turned on.

Cause: The TCD is set to enabled by this step, but a carrier gas with a flow rate of at least 10 sccm is required to enable the TCD.

Action: Add a gas flow step configured with a carrier gas flow rate of at least 10 sccm before the step enabling the TCD, or set the TCD to disabled in the specified step and add a Set Detector step with the TCD enabled to the analysis conditions task list after a step configuring the carrier gas flow to at least 10 sccm.

6027 Step [n]. A carrier gas must be selected and flowing at least 10 sccm while the detector is on.

Cause: The TCD is set to enabled by this step or previous steps, but a carrier gas with a flow rate of at least 10 sccm is required while the TCD is enabled

Action: Change the carrier gas flow rate to at least 10 sccm, or set the TCD to disabled before this step.

6028 Step [n]. A loop gas must be selected and flowing before loop injection.

Cause A: An unconfigured gas is selected for use by the loop mass flow controller.

Action A: If the gas is connected to the analyzer, go to **Unit [n] > Unit Configuration** and add the gas to the gas selections.

If the gas is not connected to the analyzer, either connect the gas and add the gas to the gas selections in the unit configuration or change the gas selected for use by the loop mass flow controller for this step.

Cause B: An invalid loop gas is selected for the specified step.

Action B: Correct the selected loop gas in the specified step.

6029 Step [n]. No carrier gas selected.

Cause: The specified step configures a carrier flow rate below 10 sccm while the TCD is set to enabled.

Action A: Add a Set Detector step prior to this step with the TCD set to disabled.

Action B: Correct the selected carrier gas and flow rate in the specified step.

6030 Step [n]. The detector must be turned on before the start of data recording.

Cause: The TCD has not been set to enabled prior to a TCD recording block.

Action: Add a Set Detector step prior to the TCD recording block with the TCD set to enabled.

6031 Step [n]. Flow of an inert gas for a minimum of 10 minutes is required between hydrogen and oxygen flows from the same inlet manifold.

Cause: Hydrogen-oxygen mixtures are potentially unsafe.

Action: Between hydrogen and oxygen flow steps, add steps to flow an inert gas for a minimum of 10 minutes.

6032 Step [n]. Combining of hydrogen and oxygen in carrier and loop gas selections is not allowed.

Cause: Hydrogen and oxygen are selected as carrier and loop gases in the specified step. Simultaneous gas flows of hydrogen and oxygen is not allowed.

Action: Correct the gas flow step to prevent this condition.

6033 Calculated Po of [n] for [n] at analysis temperature [n] is out of range.

Cause: The P_0 calculated from the analysis temperature is outside the allowed range.

Action: Verify the analysis temperature. Verify that the adsorptive properties file for the analysis gas is available in the param subdirectory of the application directory, and reselect the analysis gas in the sample file analysis conditions.

6035 Step [n]. A manual injection gas must be selected in a preceding gas flow step.

Cause: A manual injection was selected in the specified dose step, but a manual injection gas was not specified in a preceding gas flow step.

Action: Select an injection gas in a gas flow step preceding the dose step configured for a manual injection.

6036 Step [n]. Carrier gas [n] does not match an adsorptive property file in the adsorptive properties library.

6037 Step [n]. Loop gas [n] does not match an adsorptive property file in the adsorptive properties library.

Cause: Adsorptive properties library does not contain an ADP file matching the selected gas.

Action: Add the appropriate ADP file to the adsorptive properties library.

6211 The gas selected for this task is different from the gases selected for the neighboring tasks. An evacuation task must be added to add this task. Add evacuation and proceed?

Cause: A new task was entered and the gas does not match the gas in the previous task. Mixing gases may be dangerous.

Action: Select **Yes** to automatically insert the evacuation task. Select **No** to continue editing the task options.

6211 You cannot delete the only evacuation task between two tasks with different gases.

Cause: An evacuation task is required between two tasks with different gases in the preparation options in-situ-activation task list of a chemical adsorption sample file.

Action: Enter an evacuation task between the two tasks.

6212 Adding this leak test will require a preceding evacuation. Do you wish to add both tasks?

Cause: By inserting or deleting a task in the *Selected Tasks* list on the *Analysis Conditions*

window, a leak test task was entered without a preceding evacuation task. The leak test will fail if the sample pressure exceeds 0.5 mmHg.

Action: Click **Yes** to evacuate the sample between the two tasks. Click **No** to exclude evacuation

6213 The maximum allowed number of tasks is selected. Delete some tasks before proceeding.

Cause: An attempt was made to insert more than twenty tasks.

Action: No more than twenty tasks may be specified in one sample file. If additional preparation steps are required, use two sample files. The first sample file should contain only preparation tasks; the second file should contain any remaining preparation tasks and an analysis task.

6215 The dosing method must be normal or vapor.

Cause: The dosing method for a chemi analysis must be set to normal or vapor.

Action: Check the analysis adsorptive properties in the analysis conditions of the sample file.

6216 The vapor source heating mantle and the sample furnace cannot both be controlled during analysis. Either Adsorptive Vapor Source Temperature heating mantle control or Temperature Options Furnace temperature control must be disabled.

Cause: When the dosing mode for a chemical analysis is set to vapor, simultaneous vapor and furnace temperature control is not allowed.

Action: Disable either the vapor source temperature heating mantle in the analysis adsorptive properties or the furnace temperature control in the temperature options.

6232 [n] cannot be produced: No data points were selected for inclusion in the calculations.

Cause: Fewer than two points were selected for the Difference or Sinfelt report calculation.

Action: Select two or more data points for the line fit.

6233 [n] not compatible with the MFC seals. Kalrez seals are recommended for use with this fluid.

Cause: Kalrez seals are indicated for the fluid specified in a flow task in the preparation options in-situ-activation task list of a chemical adsorption sample file.

Action: Contact your Micromeritics Service Representative.

6234 [n] is in the liquid phase at ambient temperature and pressure and cannot be used with this MFC.

Cause: Fluids selected for flow tasks in the preparation options in-situ-activation task list of a chemical adsorption sample file must be in the gas phase at ambient temperature and pressure.

Action: Select another fluid for the flow task.

6264 Calculations failed for first analysis data.

6265 Calculations failed for repeat analysis data.

6266 Calculations failed for differential data.

Cause: Calculations for the primary/repeat/difference data set failed. Not enough points were supplied to the line-fit, or the line-fit could not be successfully computed.

Action: Ensure that an appropriate selection of data has been made for the calculation.

6267 Fewer than two repeat points are available.

6268 Fewer than two difference points are available.

6269 Line fit could not be done for repeat data.

6269 Line fit could not be done for primary data.

6269 Line fit could not be done for difference data.

Cause: Fewer than two primary/repeat/difference points were passed to the line fit calculation.

Action: Select two or more data points for the line fit calculations.

6560 None of the requested quantities adsorbed is within the range of the primary data of more than one sample file.

6561 None of the requested quantities adsorbed is within the range of the repeat data of more than one sample file.

Cause: The Heat of Adsorption report requires isotherm data to be within the range of the calculations quantity adsorbed values.

Action: Increase the range for the table of quantity adsorbed values.

6563 The sample [n] does not have enough primary data. A minimum of two adsorp-

tion points is required.

6564 The sample [n] does not have enough repeat data. A minimum of two adsorption points is required.

6565 The sample [n] does not have enough difference data. A minimum of two adsorption points is required.

Cause: Less than two adsorption points were obtained from the indicated sample for the Heat of Adsorption report.

Action: Ensure the indicated sample has a valid adsorption isotherm.

6566 The sample [n] does not have any primary data in the range of the requested quantities adsorbed.

6567 The sample [n] does not have any repeat data in the range of the requested quantities adsorbed.

Cause: The sample does not have any primary data in the range of the requested quantities adsorbed.

Action: Extrapolation is not allowed. Ensure that enough isotherm data is inside the range of the requested quantities adsorbed for interpolation.

6569 No data sets are selected.

Cause: Neither the primary or repeat data checkbox was selected for the chemisorption Heat of Adsorption report.

Action: Ensure one or both of these boxes is checked.

6570 No reports sets are selected.

Cause: None of the three printed Heat of Adsorption reports was selected for printing (tabular, Isosteres, Heat of Adsorption plot).

Action: Select at least one of the Heat of Adsorption reports: Tabular, Isosteres or Heat of Adsorption Plot.

10180 [n] Transducer offset calibration rejected (current: [n], new: [n], max: [n]).

Cause: There is problem with communication between the analyzer and the vacuum gauge.

Action: Contact your Micromeritics Service Representative.

10190 [n] transducer scale calibration rejected (current: [n], new: [n], nominal: [n]),

min: [n], max: [n]).

Cause: The transducer scale calibration was rejected.

Action: Contact your Micromeritics Service Representative.

10200 [n] transducer underrange detected.

Cause: There is a problem with the transducer underrange.

Action: Contact your Micromeritics Service Representative.

10210 [n] transducer overrange detected.

Cause: A manifold pressure over 1000 mmHg was detected.

Action: Observe caution when operating the analyzer manually. Contact a Micromeritics service representative if this error message continues.

10240 Temperature offset calibration rejected.

10250 Temperature scale calibration rejected.

10270 In direction [n], servo [n] calibration rejected (speed: [n] rps, motor temperature [n], controller temperature [n]).

Cause: There is a problem with the calibration specified in the error message.

Action: Contact your Micromeritics Service Representative.

10280 Servo DAC timeout detected.

Cause: There is a problem with the servo DAC timing out.

Action: Contact your Micromeritics Service Representative.

10300 Turbo pump failure detected, unable to maintain minimum speed.

Cause: There is a problem with the turbo pump.

Action: Contact your Micromeritics Service Representative.

10310 Turbo pump off during analysis. Turn turbo pump on before resuming analysis.

Cause: The turbo pump is speed below the threshold for proper operation. The analysis was suspended.

Action: Ensure the turbo pump is powered on and operational before resuming the ana-

lysis.

10320 Turbo pump communications error detected.

Cause: There is a problem with the turbo pump.

Action: Contact your Micromeritics Service Representative.

10360 Time limit exceeded while waiting for the elevator to rise into position (elapsed: [n] s, max allowed: [n] s, status: [n], alarm code: [n], inputs: [n], position: [n]).

Cause: There is a problem with the elevator.

Action: Contact your Micromeritics Service Representative.

10370 Time limit exceeded while waiting for the elevator to lower into position (elapsed: [n] s, max allowed: [n] s, status: [n], alarm code: [n], inputs: [n], position: [n]).

Cause A: There is a problem with the elevator.

Action A: Check the Dewar. Remove ice if necessary, then restart the analysis. Contact your Micromeritics Service Representative.

Cause B: The Psat tube is interfering with elevator movement.

Action B: Ensure the Psat tube is close to the sample tube and the Dewar lid is over both the sample and Psat tubes, then restart the analysis. Contact your Micromeritics service representative if necessary.

10380 Elevator error detected (code: [n]).

10390 Homing of the elevator failed (position: [n], home sensor: [n]).

Cause: There is a problem with the elevator.

Action: Contact your Micromeritics Service Representative.

10409 [n] mass flow controller set gas error detected. Expected gas: [n], not recognized.

Cause: This message indicates an attempt was made to use a gas for which the mass flow controller has not been programmed.

Action: Verify the gas mnemonic specified is supported by the 3Flex. If it is, contact your Micromeritics service representative about replacement of the mass flow controller.

10410 Elevator communications error detected.

Cause: There is a problem with the elevator.

Action: Contact your Micromeritics Service Representative.

10411 [n] mass flow controller set flow target error detected. Expected target: [n]/min, Actual target: [n]/min.

Cause: This message indicates an attempt was made to set the mass flow controller to a flow rate that is outside the range supported by this controller for the specified gas.

Action: Modify the setting specified, whether manually or in analysis conditions, to conform with the range of flow rates available.

10412 [n] mass flow controller communications error detected.

Cause: There is a problem with the specified mass flow controller communication.

Action: Contact your Micromeritics Service Representative.

10414 [n] Rotary valve move error detected. Expected position: [n], Actual position: [n].**10415 [n] Rotary valve initialization error detected. Number of ports: [n] expected [n].**

Cause: A rotary valve command did not complete successfully.

Action: Contact your Micromeritics Service Representative.

10416 [n] Rotary valve communications error detected.

Cause: There is a problem with the specified rotary valve communication.

Action: Contact your Micromeritics Service Representative.

10417 [n] Rotary valve actuation specified, valve is not present.

Cause: A rotary valve command was given to a rotary valve that is not detected as installed.

Action: Contact your Micromeritics Service Representative.

10418 Time limit exceeded while waiting for baseline stable (elapsed: [n] s, slope: [n] %/min, threshold: [n] %/min, remaining duration [n]s).**10419 Time limit exceeded while waiting for baseline return (elapsed: [n] s, change: [n] %/min/min, threshold: [n] %/min/min, remaining duration [n] s).**

Cause A: The signal did not meet the specified threshold for baseline stability within the specified time period.

Cause B: The signal did not meet the specified threshold for a return to baseline within the specified time period.

Action: A number of factors affect the thermal conductivity detector baseline including effectiveness of the cold trap, the sample under analysis, flow rate and temperature stability, gas contamination, as well as the condition of the detector. Verify that the cold trap is properly prepared. Check for leaks in the carrier path. Verify stable operation of the carrier mass flow controller and the manifold and furnace temperature sensors and temperature control. If the problem persists, the thermal conductivity detector filaments may be contaminated or need to be replaced. Contact your Micromeritics Service Representative.

10420 [n] over-pressure detected (pressure: [n], max allowed: [n]).

Cause A: A pressure greater than 1000 mmHg was detected in the analyzer. The analyzer has automatically canceled any operations in progress and taken action to relieve the pressure.

Action A: If the analyzer was being operated manually, review recent activity to identify the cause of the overpressure and avoid a repetition. Contact a Micromeritics service representative if this error message continues.

Cause B: If the error occurred when the Dewar was lowered, excessive adsorption of condensation of gas may have occurred during analysis and returned to gas phase too rapidly when the Dewar was lowered.

Action B: Revise the analysis conditions or sample quantity to prevent recurrence. Contact a Micromeritics service representative if this error message continues.

Cause C: If the error occurred during dosing from a gas inlet, the gas inlet pressure might be excessive.

Action C: Adjust the gas inlet pressure to recommended range. Contact a Micromeritics service representative if this error message continues.

10422 The thermal conductivity detector was enabled without a minimum of [n]/min gas flow for [n] minutes. The detector has been disabled.

Cause: While the TCD is enabled, a minimum carrier flow rate is required.

Action: Do not enable the TCD without carrier gas flow at the minimum specified rate. Do not disable carrier gas flow while the TCD is enabled.

10424 The thermal conductivity detector encountered an electronic error (control status: [n]). The detector has been disabled.

Cause: An error was detected in the TCD electronics.

Action: Contact your Micromeritics Service Representative.

10431 An invalid dynamic chemisorption script step was encountered. (step: [n], offset in script: [n], type: [n], size: [n])

10432 A dynamic chemisorption script experiment was ended during recording. (step: [n], offset in script: [n], type: [n], size: [n])

10433 A dynamic chemisorption script experiment was ended during repeat. (step: [n], offset in script: [n], type: [n], size: [n])

10434 A dynamic chemisorption script step had the wrong experiment or step number. (step: [n], offset in script: [n], type: [n], script step: [n])

10435 A dynamic chemisorption script record step was encountered during recording. (step: [n], offset in script: [n], type: [n], size: [n])

Cause: An error was detected in the analysis conditions for the currently running sample.

Action: Contact your Micromeritics Service Representative.

10436 The maximum number of dynamic chemisorption recording segments was exceeded. (step: [n], offset in script: [n], type: [n], segments: [n])

Cause: Data has exceeded the maximum limit for an analysis.

Action: Reduce the amount of data collected during analysis by reducing the data

10437 A dynamic chemisorption script end record step was encountered while not recording. (step: [n], offset in script: [n], type: [n], size: [n])

10438 A dynamic chemisorption script repeat step was encountered during repeat. (step: [n], offset in script: [n], type: [n], size: [n])

10439 A dynamic chemisorption script end repeat step was encountered while not repeating (step: [n], offset in script: [n], type: [n], size: [n])

Cause: An error was detected in the analysis conditions for the currently running sample.

Action: Contact your Micromeritics Service Representative.

10441 The maximum number of dynamic chemisorption recording marked events was exceeded. (step: [n], type: [n], events: [n])

10442 The maximum number of dynamic chemisorption recording peaks was exceeded. (step: [n], repeats: [n], peaks: [n])

Cause: Data has exceeded the maximum limit for an analysis.

Action: Reduce the amount of data collected during analysis by reducing the data collection rate, reducing the length of data collection, or moving multiple experiments in a single analysis to single experiments in multiple analyses.

10560 Instrument communications error detected.

Cause: There was a fatal error in communication between the application and the application 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.

10710 Manifold temperature error detected (manifold: [n], port: [n], heater: [n], manifold target: [n], power: [n]).

Cause: An error was detected during manifold temperature control.

Action: Ensure the cover to the upper cabinet of the analyzer is securely fastened. If the source of the problem has been identified and corrected, close the application program, power the analyzer off for a few seconds, then turn the power ON. Restart the application program. Contact a Micromeritics service representative if this error message continues. Contact the local fire department, if necessary.

10715 Manifold temperature unresponsive to heating, changed [n] in [n] minutes (manifold: [n], port: [n], heater: [n], manifold target: [n], power: [n]).

Cause: The manifold temperature is not responding to changes in the temperature target.

Action: Contact your Micromeritics Service Representative.

10725 Manifold temperature control off during analysis. Turn manifold temperature control on before resuming analysis.

Cause: Manifold temperature control was turned off during an analysis.

Action: Turn on the manifold temperature control through the analyzer schematic. Wait for a stable manifold temperature before resuming the analysis.

10730 Heater temperature error detected (type: [n], actual: [n], max allowed: [n], target: [n], power: [n]).

Cause: An error was detected with the mantle temperature.

Action: Contact your Micromeritics Service Representative.

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- 10735** **Temperature unresponsive to heating, changed [n] in [n] minutes (type: [n] , actual: [n] , target: [n] , power: [n]).**
Cause: The mantle temperature is not responding to changes in the temperature target.
Action: Contact your Micromeritics Service Representative.
- 10740** **Mantle breaker open (type: [n], actual: [n], target: [n], power: [n]).**
Cause: The circuit breaker to the mantle is open.
Action: Contact your Micromeritics Service Representative.
- 10743** **Sample temperature control error (actual: [n], scheduled: [n], furnace: [n], target: [n], rate: [n]/min, power: [n]).**
Cause: While controlling the furnace temperature, the difference between the furnace and sample temperatures exceeded the maximum temperature delta allowed.
Action: Contact your Micromeritics Service Representative.
- 10747** **Furnace temperature more than [n] different from sample temperature (furnace: [n], sample: [n], target: [n], rate: [n]/min, power: [n]).**
Cause: While ramping the furnace temperature, the difference between the actual and expected temperature exceeded the maximum temperature delta allowed.
Action: Contact your Micromeritics Service Representative.
- 10750** **Time limit exceeded during evacuation (target: [n], pressure: [n], elapsed: [n] s).**
Cause: The maximum time for evacuating the sample was exceeded. Possible causes are a leak in the sample tube fitting, a crack in the sample tube, or a poorly degassed sample.
Action: Check the sample tube and the sample tube fitting. Ensure that the tube is securely attached to the port. Ensure that the sample is properly degassed, then restart the analysis.
- 10753** **Mass flow rate is out of tolerance (gas: [n], valve: [n], flow constant: [n], target: [n]/min, actual: [n]/min, minimum: [n]/min, maximum: [n]/min).**
Cause: During in-situ-activation flow task, the difference between the actual and expected flow rates exceeded the flow rate tolerance.
Action: Check the gas regulator for proper inlet gas pressure as specified in the analyzer Operator Manual. Contact your Micromeritics Service Representative.
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10760 Time limit exceeded while dosing (gas: [n], valve: [n], target: [n], pressure: [n], elapsed: [n] s).

Cause A: The specified pressure was not attained. The gas regulator may be set too low or turned off.

Action A: Set the gas regulator to 10 psig (0.7 bar), then restart the analysis.

Cause B: The gas cylinder is empty.

Action B: Connect a new gas cylinder, then restart the analysis.

10770 Attempts to dose failed on sample port [n]. (qty required: [n], qty dosed: [n], sample pressure: [n], gas: [n]).

Cause: There was a problem dosing the sample to target pressure. The analyzer was unable to dose the required quantity of gas after several attempts.

Action: Check that the outlet stage of the gas regulator is within specification. Review the analysis parameters.

10780 Leak test failed (sample port: [n], interval: [n] s, leak rate: [n]/min, max allowed: [n]/min).

Cause: With the sample port valve closed, the sample pressure increased by 0.15 mmHg before the leak test duration was completed.

Action: Check sample tube fitting and ensure that it is securely attached to the port, then restart the analysis.

10790 Quantity dosed on sample port [n] has exceeded the maximum of [n] (qty dosed this point [n], pressure: [n]: [n], gas: [n]).

Cause: An excessive quantity of gas has been dosed into the sample port due to an excessive quantity of a sample with high pore volume, condensation of gas due to a lower than expected saturation pressure, or a leak.

Action: Review the analysis conditions, the sample quantity, and the sample tube connection to identify, then correct the problem before repeating the analysis.

10801 P0-over-sample failed on sample port [n] (pressure: [n], last pressure: [n], [n], rel pressure: [n], qty ads: [n], doses: [n]).

Cause: Attempts to condense the adsorptive gas in the sample tube have failed due to an excessive quantity of a sample with high pore volume, adsorptive gas contamination, a higher than expected saturation pressure, or a leak.

Action: Review the analysis conditions, the sample quantity, the gas supply, and the

sample tube connection to identify, then correct the problem before repeating the analysis.

10830 **Ambient free-space measurement failed on sample port [n] (qty in free-space: [n], qty in port: [n], pressure: [n], port vol: [n], port temp: [n]).**

Cause: There is a problem with the warm free-space measurement on the sample port.

Action: Ensure that no problem exists with the sample tube or gas connection.

10840 **Analysis free-space measurement failed on sample port [n] (qty in free-space: [n], qty in port: [n], pressure: [n], port vol: [n], port temp: [n], ambient free-space: [n]).**

Cause: There is a problem with the cold free-space measurement on the sample port.

Action: Ensure there is no problem with the sample tube or analysis bath.

10850 **Maximum target pressure exceeded in sample port [n] (target pressure: [n], [n], max instrument manifold pressure: [n], gas: [n], max gas manifold pressure: [n], max transducer pressure: [n]).**

Cause: A target pressure was requested that exceeds the maximum allowed. The maximum pressure may be based on saturation pressure of the gas at the temperature of the gas source, the manifold, the sample, or ambient temperature.

Action: Review the maximum allowable pressures in the error message and the analysis conditions to identify and correct the problem before repeating the analysis.

10860 **Psat gas [n] is not condensing. (pressure: [n] maximum manifold pressure: [n]).**

10870 **Adsorptive [n] is not condensing. (pressure: [n] maximum manifold pressure: [n]).**

Cause: The gas specified in the error message is not condensing.

Action: Review the analysis parameters, gas connections, and analysis bath.

10880 **Zeroing of the transducers failed.**

Cause: The transducers failed to zero out.

Action: Contact your Micromeritics Service Representative.

10890 **Purification of the adsorptive [n] failed at [n] (charge pressure: [n], minimum allowed: [n]).**

Cause: The adsorptive gas failed to purify at the specified pressure.

Action: Check the gas connection.

10940 The Dewar shield was not present when the analysis was started.

Cause: The Dewar shield was not detected when the analysis was started.

Action: For best performance, install the Dewar shield before starting an analysis.

10945 The instrument was restarted while an analysis was in progress.

Cause: The analyzer restarted due to a power failure or an analyzer error.

Action: If power to the analyzer was cycled by the operator or by an electrical outage, allow the analysis to complete the automatic termination and repeat the analysis. If the analyzer restarted under normal operating conditions, contact your Micromeritics service representative.

10950 Power supply voltage error detected (type: [n], voltage: [n] volts, nominal: [n] volts).

Cause: There is a problem with the power supply voltage.

Action: Contact your Micromeritics Service Representative.

10980 Line frequency out of tolerance (Frequency: [n] Hz, Minimum: [n] Hz, Maximum: [n] Hz).

Cause: A problem was detected in the power supplied to the analyzer.

Action: Contact your Micromeritics Service Representative.

10981 CryoStat operation failed or was canceled (errors: [n], target: [n], last: [n]).

Cause: The wait for the cryostat to reach target temperature was either skipped or failed due to a communications issue with the cryostat.

Action: Ensure that the cryostat, the analyzer, and the Windows computer are connected to the same network switch or hub. Ensure that no other devices are connected on the same subnet with the same IP address.

10990 Pneumatic pressure out of tolerance (Pressure: [n] psig, Minimum: [n] psig, Maximum: [n] psig).

Cause: A problem was detected in the compressed air supply used by the pneumatically actuated, hard seal valves and the furnace.

Action: Consult the Operator Manual for the compressed air supply pressure required for proper operation of the analyzer.