

ASAP[®] 2060

ACCELERATED SURFACE AREA AND POROSIMETRY SYSTEM



ERROR MESSAGES

Apr 2016
(Ver 1.x)

ERROR MESSAGES FOR THE ASAP 2060

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.

2430 Error accessing file [n], 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: A software 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.

2431 Error writing file [n], error code = [n].

Cause A: User logged onto a computer that does not have Write permissions.

Action A: Contact your IT department to change user permissions.

Cause B: Insufficient hard disk to perform the operation.

Action B: Copy files not used regularly to the hard disk external media. Delete them from the hard disk, and then try the operation again.

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 (sample information, analysis conditions, adsorptive properties, or report options) have been added to this directory by some function other than the analyzer program.

Action: Click **Yes** to update the directory information with data from each new file. This oper-

ation 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 wrong [n] of data, expected [n] bytes.

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

Action: Contact your Micromeritics service representative.

2436 Path specification [n] is invalid.

Cause: An invalid path name and/or extension was entered.

Action: Type a valid path name (including the proper extension), then press **Enter**.

2437 File name [n] does not exist.

2437 Overlay file [n] does not exist.

Cause: The overlay 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 software. A new file will be created. Also ensure that the hardware directory is not write-protected.

2438 Disk drive [n] is inaccessible.

2439 Could not register file.

2440 Subset not found.

2441 Seek within file failed.

2442 Bad header in subset file.

2443 Subset owner denied access

2444 Not a valid file format.

2445 Subset wrote the wrong amount of data.

2446 Error reading data.**2447 Error writing data.**

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

Action: Contact your Micromeritics service representative.

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.

2450 Sample Defaults may not be edited while this operation is in progress. Do you wish to save and close the Sample Defaults edit session?

Cause: An automatic analysis (an analysis in which sample files are created using the defaults) was processing while editing the defaults.

Action: Finish the edit session of the defaults, close the window, then restart the automatic analysis.

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 an 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 instrument 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 re-started. A power failure to the instrument could cause some data to be lost.

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 instrument. All displays for that instrument 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 software. Contact your Micromeritics service representative.

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

Cause: At least one instrument must be active for the application to operate. The initialization of all of the instruments 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 instrument's failure to initialize. Refer to the instructions for that message.

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

2471 [n] has an invalid communications port specified. It cannot be initialized.

Cause: The communications port specified for this analyzer during installation (or configuration) is invalid.

Action: Use the *Setup* program to change the analyzer configuration.

2474 [n] communications port [n] specified in the program control files is already in use. Unit cannot initialize.

Cause: The communications port assigned to the indicated unit is in use by another program.

Action: End the program using the busy port or use the *Setup* program to change the communications port assigned to this program.

2475 [n] communications port [n] specified in the program control files cannot be accessed. Unit cannot initialize.

Cause: The operating system has prevented the application from accessing the communications port.

Action: Review the hardware configuration of the computer. Ensure no other application is using the port. Contact a Micromeritics service representative if this error message continues.

2476 [n] startup failed. Cannot initialize the communications port.

Cause: The communications port specified during installation is invalid.

Action: Use the *Setup* program to change the analyzer configuration. Contact a Micromeritics service representative if this error message continues.

2477 [n] did not properly initialize.

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

Action A: Run the *Setup* program and ensure that a valid port is specified; if not, specify a valid one when prompted.

Action B: Reinstall the software, then restart application.

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

2478 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.

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: An unexplained error prevented access to this file.

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

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 Windows menu item to get a list of all open windows, one of which may contain this file).

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 The 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 different sample file, or create a new one and click **Replace All** to copy parameters from the file originally selected.

2486 Could not construct [n] report type. Program will terminate.

2487 Could not start report generator. Error code [n]. Program will terminate.

Cause A: Full rights to the application's 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 being used in another edit operation.

Action: Check the Windows list to locate the other edit session.

2489 File [n] cannot be opened for writing.

Cause: The specified file in a Save As operation is already open for edit.

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

2490 No '.INI' file present. Application will terminate.

Cause: The ASCII .INI file containing initialization information and system options information used during program startup does not exist.

Action: Restore the .INI file from back-up, or re-install the software.

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.

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's status, for example, from *automatically collected* to *manually entered* could not be done.

Action: Contact your Micromeritics service representative. Record the name of the sample 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.

2501 System resources have reached a dangerously low level. Please close some windows to avoid the loss of data.

Cause: A large number of windows are open and consuming the system resources available to all applications.

Action: Close one or more windows. Contact your Micromeritics service representative.

2502 Error writing to file [n] during print. Error code [n].

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.

2505 Error logger cannot be initialized. Error code [n]. Program will exit.

Cause: An internal processing error has occurred.

Action: Contact your Micromeritics service representative.

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

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

Action: Enter the name of a file with a status of *Complete*, *Analyzing*, or *Entered*. Alternatively, select a sample file from the list box.

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

Cause: A sample file has been selected which does not have a *No Analysis* or *Prepared* status.

Action: Select a different file with a status of *No Analysis* or *Prepared*.

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 A: Ensure the destination location has no problems.

Action B: Choose an alternate media to save the calibration data.

2515 **Warning: Changing the calibration information will affect the performance of the instrument. Only qualified service personnel should do this. Do you wish to proceed?**

Cause: The process of performing a calibration operation was started.

Action: Calibration operations should only be done by or under the direction of qualified service personnel.

2516 **Warning: Keeping a backup copy of the calibration data is recommended by Micromeritics. Would you like to do so now?**

Cause: A calibration operation was performed and a backup copy is recommended.

Action: Go to **Unit [n] > Calibration > Save to File** to perform a calibration save operation.

2517 **Canceling this dialog will reset the calibration state to what it was when this dialog was first opened. Are you sure you want to cancel?**

Cause: The calibration has not been accepted.

Action: If the calibration operation was successful, click **Accept**.

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 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 your Micromeritics service representative.

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

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

Action: If there are no analyzers other than the one connected to the computer, click **Yes**, then allow the updated software 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 instrument. If there is another Micromeritics application open and initializing an instrument, wait until the instrument initialization completes or is canceled.

Contact a Micromeritics service representative if this error message continues.

2548 **System status [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 ana-

alyzer connection and the computer connection. Contact your Micromeritics service representative.

2549 Error accessing online manual file [n].

Cause: The operator's 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.

2550 Attempts to acquire the instrument's status timed out.

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.

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 instrument was substituted without properly changing the instrument 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 software.

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 an 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 instrument is analyzing and cannot be interrupted.

Action: Try the operation later.

2559 SPC directory [n] does not exist.

Cause: A directory in one or more of the files selected in a SPC Report is invalid.

Action: Click [Samples](#) in the SPC report and verify the locations of all sample files.

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 instrument log file [SN.LOG].

Action: Exit the application. Go to the \HARDWARE subdirectory of the instrument's program directory and rename the [SN.LOG] file where SN is the serial number of the instrument. 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: Choose 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 instrument.

Action: Choose 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.

2576 The instrument [n] is not calibrated.

Cause: The analyzer application is in the process of initializing the instrument 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 software.

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

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

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

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

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

Action: Select a different sample file.

2580 Problem encountered trying to load dbghelp.dll.

2581 Problem encountered trying to create the trace file.

2582 Bad MiniDumpWrite function found in dbghelp.dll.

2583 Error writing trace.

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 the software.

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.

2586 Sample file [n] has no pressure 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 choose 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 software. 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.

2599 [n] does not have the correct format. Please load a fluid property information file.

Cause: The selected file was not a fluid property file.

Action: Select a file with fluid property information.

2600 The temperatures of [n] are not strictly ascending.

Cause: The temperatures for the columns of compressibility factors are not in increasing order.

Action: Order the columns of compressibility factors by increasing temperature.

2601 The pressures of [n] are not strictly ascending.

Cause: The pressures for the rows of compressibility factors are not in increasing order.

Action: Order the rows of compressibility factors by increasing pressure.

2603 Error writing [n].

Cause: An error occurred while writing the selected fluid property file.

Action: Check the disk and ensure there is plenty of unused space. Scan the disk for bad sectors, then retry the operation.

2603 Error writing [n].

Cause: An error occurred while writing the selected fluid property file.

Action: Check the disk and ensure there is plenty of unused space. Scan the disk for bad sectors, then retry the operation.

2604 Can not open [n] for reading.

Cause: The selected fluid property information file could not be opened.

Action: The file is likely corrupted. Restore the file from backups if possible. If the file was one provided with the software, re-install the software.

2605 Can not open [n] for writing.

Cause: The selected fluid property information file could not be opened.

Action: Check the disk and ensure there is plenty of unused space. Verify if the file has been marked as read-only. Restore the file from backups if possible. If the file was one

provided with the software, re-install the software.

2606 Can not load [n] because the fluid property table is too large.

Cause: The fluid property information file is too large to be stored in a sample file.

Action A: Verify that the selected file is really a fluid property information file.

Action B: Delete unneeded rows and columns from the compressibility factor table.

4012 Psat gas in sample file does not match any gas in the unit.

Cause: If using *Measure psat of a gas in P_o and T* options in *Analysis Conditions*, the selected gas is not one of the selected gases in *Unit Configuration*.

Action A: If the incorrect psat was selected, change the psat gas.

Action B: If the gas was recently connected to the instrument, update the *Unit Configuration*.

4013 The Incremental Dosing option is not available on the selected unit.

Cause: The MicroPore option was selected but the instrument does not have the micropore option.

Action: Install the MicroPore option before starting the analysis.

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*.
- 4021** **The entered [n] value ([n] and Temperature Option of the Analysis Conditions is outside the range of the pressures listed in the Psat vs Temperature Table (Adsorptive Properties)).**
- Cause:* The entered P_0 value is not within the range of pressures selected for analysis.
- Action A:* Enter a new P_0 value.
- Action B:* Add more pressures and corresponding temperatures to the *Analysis Conditions* pressure table to include the presently selected P_0 value.
- 4022** **The entered bath temperature value ([n] and Temperature Options of the Analysis Conditions) is outside the range of the temperatures listed in the Psat vs Temperature Table (Adsorptive Properties).**
- Cause:* The entered bath temperature is outside of the range of temperatures specified in the *Adsorptive Properties*.
- Action A:* Change the entered temperature.
- Action B:* Change the adsorptive.
- Action C:* Add more temperatures and corresponding pressures to *Adsorptive Properties*.
- 4023** **The file [n] cannot be prepared for analysis. It is open for editing and contains errors.**
- Cause:* An attempt was made to start an analysis using a file that contains errors and is open for editing.
- Action:* Finish editing this file, save and close it, then start the analysis.
- 4024** **Backfill gas in sample file does not match any gas in the unit.**

Cause: The backfill gas specified in the sample file does not match the analysis gas entered in the *Unit Configuration*.

Action A: If the wrong backfill gas was selected in the sample file, change the backfill gas in the file.

Action B: If necessary, attach the appropriate gas cylinder, then enter the gas in the *Unit Configuration*.

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-Astkhov: 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.

4027 Fewer than two sample files have data suitable for heat of adsorption reports.

Cause: Less than two of the selected sample files for heat of adsorption reports contain appropriate data.

Action: Edit the *Quantity Adsorbed* table, or select other sample files.

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.

4030 Preparations failed in primary data.

Cause: Appropriate data were not available to generate the report.

Action: This message was preceded by a different error message. Refer to the cause/action of the preceding message.

4030 P_0 cannot be measured at intervals when dosing from the Psat tube.

Cause: The dosing option in *Adsorptive Properties* conflicts with the P_0 option.

Action: Either edit *Adsorptive Properties* and change the dosing option, or edit the P_0 option in *Analysis Conditions*.

4031 Not enough points with a relative pressure in the range $[\eta]$.

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.

4032 The Psat tube cannot be for dosing or for measuring saturation pressure when the cryostat is used.

Cause: The dosing option in *Adsorptive Properties* cannot be used in conjunction with the cryostat.

Action: Edit *Adsorptive Properties* and change the dosing option.

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.

4037 Computations failed while processing the primary data set. No reports will be produced.

Cause: The preparation of data for reporting could not be successfully completed. No Horvath-Kawazoe reports will be produced. This message will always be preceded with another one containing additional information.

Action: Refer to the error message number which preceded this one for an explanation.

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 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.

4042 0.0 cannot be a starting or ending pressure for a geometric progression from low pressure.

Cause: An attempt was made to generate a pressure table from a geometrically progressing range.

Action: Change the 0.0 entered value.

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.

4048 Warning: An error occurred while restoring the heat of adsorption report editor.

Cause: The state of the heat of adsorption report editor could not be restored. Default settings will be used.

Action: No action.

4049 The sample [n] does not have enough data. A minimum of two adsorption points is required.

Cause: A sample file has been included in the Heat of Adsorption report that does not have enough data.

Action: Remove the file from the selected file list.

4050 None of the requested quantities adsorbed is within the range of the collected data of more than one sample file.

Cause: The *Heat of Adsorption* report failed because the specified quantities are not within the range of the collected data.

Action: Edit the quantities adsorbed so that they are within the range of the collected data, or select other sample files.

4051 The sample [n] does not have any data in the range of the requested quantities adsorbed.

Cause: The sample's data cannot be interpolated to any of the quantities adsorbed.

Action: Edit the quantities adsorbed so that they are within the range of the collected data.

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.

4069 Dosing method choice is invalid - the Analysis Conditions choice of Absolute pressure dosing requires that the Adsorptive Properties Dosing Method is set to Normal.

Cause: There is an incompatibility between the analysis conditions choice of Absolute pressure dosing and the adsorptive properties dosing method.

Action: Edit one of the choices.

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 software, 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.

4073 The analysis gas [n] does not match the model gas [n].

Cause: The model assumes a specific gas, and the sample file uses a different one.

Action: Select a model that assumes the same gas.

4074 The analysis temperature [n] does not match the model temperature [n].

Cause: The temperature for the selected model did not match the analysis temperature.

Action: Select a different model.

4075 The models cannot be located in the models folder. Reinstall the software.

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

Action: Reinstall the software.

- 4076 Invalid sample file - Adsorptive Properties *Non-condensing adsorptive* cannot be used unless Analysis Conditions *Absolute pressure dosing* is selected.**
- Cause:* *Non-condensing adsorptive* is selected in Analysis Conditions / Adsorptive Properties and the *Absolute pressure dosing* check box is not selected in Analysis Conditions.
- Action:* If *Absolute pressure dosing* is needed, select *Absolute pressure dosing* on the Analysis Conditions window. Otherwise, edit the Analysis Conditions / Adsorptive Properties and deselect *Non-condensing adsorptive*.
- 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.
- 4081 In the compressibility factor table for [n], the 4 temperatures below [n] and 7 temperatures above must span at least 10 [n].**
- Cause:* The fluid property information file does not have enough columns of compressibility information for temperatures near the analysis temperature.
- Action:* Add rows for temperatures near the analysis temperature.
- 4082 Compressibility factors must be greater than zero for temperatures near ambient and pressures up to the maximum manifold pressure.**
- Cause:* Fluid property information indicates that the analysis gas will condense.

Action A: Check that the correct fluid properties are being used.

Action B: Change the pressure or temperature range for 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.

4093 Pressure targets at or above [n] will be excluded to prevent condensation in the manifold. Continue with the analysis?

Cause: The pressure table contains some points that would require dosing above the adsorptive's saturation pressure.

Action: Click **No** and modify the pressure table before restarting the analysis. Click **Yes** and perform the analysis omitting the points that would cause condensation.

4094 All pressure targets were excluded. Analysis canceled.

Cause: All target pressures would require dosing above the adsorptive's saturation pressure.

Action A: Verify that the saturation pressures for the adsorptive are correct.

Action B: Use lower target pressures in the pressure table.

4095 The compressibility file [n] is obsolete. Please load the fluid property information file (.FPI) for the adsorptive.

Cause: The sample file includes obsolete compressibility information from a *.DAT file.

Action: Load the *.FPI file for the adsorptive.

4096 The Analysis Conditions dosing option *Low pressure incremental dose mode* cannot be used with the Adsorptive Properties dosing method *Selective Adsorption*.

4097 The Analysis Conditions dosing option *Maximum volume increment* cannot be used with the Adsorptive Properties dosing method *Selective Adsorption*.

4098 The Analysis Conditions dosing option *First pressure fixed dose* cannot be used with the Adsorptive Properties dosing method *Selective Adsorption*.

4099 The Analysis Conditions dosing option *Selective Adsorption* requires the Analysis Conditions choice of *Absolute pressure dosing*.

4100 The Analysis Conditions choice of *Absolute pressure dosing* requires that the Adsorpt-

ive Properties dosing method is set to Normal or Selective Adsorption.

Cause: There is a conflict between *Analysis Conditions* selections and *Adsorptive Properties* selections.

Action: Change the *Analysis Conditions* dosing option or do not use selective adsorption.

4112 Hard-sphere diameter, molecular weight, and mass flow constant have been updated from the fluid property information.

Cause: A new fluid property information file was loaded. The indicated fields have been updated with values from the file.

Action: This message is informational; no action is required.

4113 An old version of the fluid property information was read. Please upgrade.

Cause: An older version of a fluid property information file was detected.

Action: Newer versions of the fluid property information files were installed with the software. Locate a newer file in the *Param* directory.

4114 The backfill gas [n] in sample file [n] does not match any gas in the unit.

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

Action: Edit the *Analysis Conditions* backfill gas and change the gas to one which is connected to the instrument.

4115 The P₀ [n] in sample file [n] does not match any gas in the unit.

Cause: The selected gas for the P₀ and T for the *Analysis Conditions* is not one of the gases connected to the instrument. Go to **Unit [n] > Unit Configuration** and verify the gas.

Action: Edit the *Analysis Conditions* P₀ and T and change the gas to one which is connected to the instrument.

4116 The adsorptive [n] in sample [n] is different from port [n] adsorptive [n].

Cause: The adsorptive selected for one analysis port is different from the adsorptive that is in the sample file selected for another port. All ports must use the same adsorptive.

Action: Edit the *Analysis Conditions* and change the adsorptive to match the other ports.

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

4117 Analysis gas in sample file [n] is not specified.

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

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 instrument.

4118 The pre-analysis backfill gases differ. Each port must use the same backfill gas.

4119 The post-analysis backfill gases differ. Each port must use the same backfill gas.

4120 The analysis gases differ. Each port must use the same analysis gas.

4121 The Psat gases differ. Each port must use the same gas for P₀ or Psat measurements.

Cause: The type of gas(specified in the error message) selected for one port in the analysis is different from the adsorptive that is in the sample file selected for another port. All ports must use the same adsorptive.

Action: Edit the *Analysis Conditions* and change the gas to match the other port(s).

4123 Helium adsorptive properties could not be found in the adsorptive properties library.

Cause: There is no *Adsorptive Properties* file for helium available to the application.

Action: An *Adsorptive Properties* file for helium was installed with the software. It was likely deleted. Either re-install the software, or create an *Adsorptive Properties* file for helium.

4124 Dosing from port [n] cannot be done because a sample is selected for analysis on that port.

Cause: The *Analysis Conditions* of a sample file calls for dosing from a port which has a sample file assigned to it for analysis.

Action: If the *Analysis Conditions* are correct for the currently selected sample file, clear the sample file selection from the port used for dosing. Otherwise, select a different sample file.

4125 Determination of P₀ from the dosing source can only be done if dosing is done

from the Psat tube, sample port, or vapor source.

Cause: If measuring Psat over the source, one of the dosing options listed in the error message must be selected.

Action: Select one of the dosing options from the error message.

4126 Warning: Measured ambient temperature is not available for calculating the maximum manifold pressure. Analysis will continue using [n].

Cause: Measured ambient temperature is not available. Analysis will continue with a reasonable room temperature

Action: Displayed as a warning. Continue the analysis.

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.

4132 Unable to read model data from directory: [n].

4133 Unable to open model file: [n].

Cause: A DFT model file is either missing from the *Models* subdirectory or has become corrupted.

Action: Restore models from a backup or re-install the software to provide the DFT models.

4135 HOA file [n] does not exist.

Cause: The sample file in the *Heat of Adsorption* report list does not exist.

Action: Go to **Report > Heat of Adsorption**. Click **Add Samples**, then select the sample file.

4136 HOA file [n] is corrupt.

Cause: The sample file in the *Heat of Adsorption* report list is corrupt.

Action: Go to **Report > Heat of Adsorption**. Select the corrupt sample file, then click **Remove Sample**. Rerun the *Heat of Adsorption* report.

4137 Measured P_0 is not allowed with a cryostat.

Cause: In an analysis using a cryostat, Measured P_0 was specified in *Analysis Conditions*.

Action: Edit the P_0 and T options in *Analysis Conditions* and choose a different option.

4138 Only entered temperature is allowed with a cryostat.

Cause: In an analysis using a cryostat, the analysis conditions specify something other than entered temperature in the P_0 and T options.

Action: Edit the existing file and change the P_0 and T options, or choose a different sample file.

4139 Dosing from Psat tube is not allowed with cryostat.

Cause: In an analysis using a cryostat, dosing from Psat tube was specified in the *Adsorptive Properties* in *Analysis Conditions*.

Action: Edit *Analysis Conditions / Adsorptive Properties* and choose a different option.

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.

Cause: Calculations failed for overlays in the BJH report.

Action: Continue printing the report for the primary data.

4148 Calculations failed for [n] primary data.

Cause: Calculations failed for the selected sample file in the BJH report.

Action: Select a different sample file.

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.

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 instrument 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 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 software running on the designated instrument is invalid.

Action: Use the SmartPrep setup program to download the proper controller software to the instrument, or if unavailable, contact a Micromeritics service representative.

4405 Fatal communications error with SmartPrep Unit [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).

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.

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], Target = [n], Limit = [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].

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], 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], Current = [n], New Scale = [n] / count, Nominal = [n] / count.

4417 Degas vacuum gauge low point calibration failed. Reference = [n] / count, Current = [0] counts.

Cause: The transducer offset calibration was rejected.

Action: Contact your Micromeritics service representative.

4418 Degas vacuum gauge high point calibration failed. Reference = [n], Current = [0] 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.

4422 The file [n] does not exist.

Cause: The selected file does not exist on the media drive.

Action: Select an existing file. Ensure that the file has been created before use.

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.

6200 **At least one report item must be selected. Press Cancel if you do not want a report.**

Cause: No reports were selected in the *Selected Reports* list. No output could be produced.

Action: Ensure that at least one report is selected for the sample and re-submit the sample for reporting, or click **Cancel**.

6240 **Leak test failed on port [n].**

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.

6241 **Maximum time limit exceeded before the port [n] elevator reached the UP position.**

Cause A: The maximum time for the analysis was exceeded before the elevator reached the UP position. Ice may be present in the bottom or the neck of the dewar.

Action A: Check the dewar and remove ice if necessary. Then restart the analysis.

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.

6241 Maximum time limit exceeded before the port [n] elevator reached the DOWN position.

Cause: The maximum time for the analysis was exceeded before the elevator reached the UP position. Ice may be present in the bottom or the neck of the dewar.

Action: Check the dewar and remove ice if necessary. Then restart the analysis.

6242 Time limit exceeded while evacuating Psat tube.

Cause: The maximum time allotted for the Psat tube evacuation operation in a 2020 physical adsorption analysis was exceeded.

Action: Contact your Micromeritics service representative.

6243 Time limit exceeded while dosing Psat tube to 925 mmHg.

Cause: The sample was at a pressure greater than 0.5 mmHg at the start of the leak test. A leak test can not be performed unless the sample has been fully evacuated.

Action: Insert an evacuation task immediately before the leak test. If an evacuation task is already present, ensure that the evacuation is being performed at the same temperature as the test and that the duration of the evacuation is adequate.

6500 Failed to evacuate manifold to VAC SET in [n] seconds. Calibration canceled.

Cause A: The vacuum set point is set too low.

Action A: Reset VAC SET point to 5.0 mmHg. If the VAC SET point is already at 5.0 mmHg or above, the vacuum gauge may need servicing.

Cause B: Leak in manifold.

Action B: Locate the leak and repair it. Restart calibration.

Cause C: Valve failure.

Action C: Identify the leaking valve. Contact your Micromeritics service representative.

6501 The 1000 mmHg transducer offset exceeds recommended limits: [n].

6502 The 10 mmHg transducer offset exceeds recommended limits: [n].

6502 The 1 mmHg transducer offset exceeds recommended limits: [n].

6503 The 0.1 mmHg transducer offset exceeds recommended limits: [n].

6503 The 1 mmHg transducer offset exceeds recommended limits: [n].

Cause: The *Pressure Gauge Calibration* operation showed the transducer offset exceeds the recommended limit.

Action: Repeat the *Pressure Gauge Calibration* operation. Contact a Micromeritics service representative if this error message continues.

6504 Unable to write the calibration file [n].

6505 Unable to read the calibration file [n].

6506 Calibration file for [n] is invalid.

Cause: A **Save to File** operation failed.

Action: Confirm there is sufficient free space on the media receiving the file and that the media is not corrupted. Contact a Micromeritics service representative if this error message continues.

6516 Sample pressure greater than [n] is not allowed.

Cause: An absolute pressure greater than (pressure) mmHg was attained during low pressure dosing (either fixed dose mode or incremental dose mode).

Action: The analysis was canceled. All previously collected data were stored.

6517 Total volume dosed greater than [n] is not allowed.

Cause A: The maximum total volume dosed in an analysis was exceeded.

Action A: Perform leak checks on the system. Contact your Micromeritics service representative.

Cause B: The value for the P_0 may be too low, causing the instrument to mistake condensation for actual adsorption

Action B: Change the analysis variables to directly measure the value of P_0 during the experiment.

Cause C: The amount of sample used may be too large. Multiply the maximum value from the Volume Adsorbed column of the Isotherm Report by the sample weight. If the result exceeds (volume) cm^3 , the amount of sample is too large.

Action C: Reduce the amount of sample.

6518 Pressure of [n] exceeds the maximum manifold pressure of [n].

Cause: The maximum pressure in the analysis was exceeded.

Action: Contact your Micromeritics service representative.

6519 Psat gas is not condensing.

Cause A: The working dewar does not contain enough bath liquid.

Action A: Retry the operation after filling the dewar.

Cause B: The Psat gas is contaminated.

Action B: Replace the Psat gas supply.

Cause C: The Psat tubing from the regulator to the instrument is contaminated.

Action C: Pump out the tubing.

6520 Power failure detected.

Cause: A power failure occurred in the specified unit, and any analyses in progress were terminated.

Action: If the program was running and an Uninterruptible Power Supply (UPS) was attached, data points were collected and stored in the sample file. If enough data points were not collected, create another sample file and start a new analysis.

6521 Transducer overrange detected.

Cause: The transducer in the specified unit has detected a pressure equal to or greater than 1000 mmHg. The exhaust port on the sample tube may be blocked.

Action A: Inspect for and clear any blockage.

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

6522 Time limit exceeded while evacuating manifold.

Cause A: Maximum manifold evacuation time was exceeded before the vacuum set point was achieved. Vacuum pump may be turned off.

Action A: Turn on vacuum pump switch. Then restart the analysis.

Caution B: The vacuum pump oil level is low.

Action B: Check the vacuum pump oil level and add more oil if necessary. Then restart the analysis.

Cause C: The manifold is contaminated or leaking.

Action C: Correct the problem. Refer to the analyzer Operator Manual on testing for leaks. Then restart the analysis.

6523 Analysis canceled: Time limit exceeded while evacuating sample (unrestricted).

Cause: The maximum time for evacuating the sample through the unrestricted valve was exceeded. Possible causes are a leak in the sample tube fitting or a crack in the sample tube.

Action: Check the sample tube and the sample tube fitting; ensure that the tube is securely attached to the port. Then restart the analysis.

6524 Analysis canceled: Time limit exceeded while evacuating sample (restricted).

Cause: The maximum time allowed for evacuating the sample through the restricted valve was exceeded.

Action: Check the sample tube and the sample tube fitting to ensure that the tube is securely attached to the port. Verify that the sample is properly degassed. Then start the analysis again.

6525 Power failure lasted too long.

Cause: A failure on an analyzer which has an Uninterruptible Supply attached has lasted for an hour or more; therefore, the analysis has been canceled.

Action: Determine the cause of the failure and correct it.

6526 Time limit exceeded while backfilling manifold to [n] with [n].

6527 Time limit exceeded while dosing manifold to [n] with [n].

Cause A: The maximum time was exceeded before the target pressure point was reached. The gas regulator may be set too low or turned off.

Action A: Set the gas regulator to 10 psig (0.7 bar). Then resume the analysis.

Cause B: The gas cylinder is empty.

Action B: Connect a new gas cylinder. Then resume the analysis.

6528 Low pressure gauge offset too high [n].

Cause: A check of the 10 mmHg or 0.1 mmHg gauge's offset during an automatic operation indicated it was too high.

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

6529 1000 mmHg pressure gauge offset is too high [n].

Cause: A check of the 1000 mmHg gauge's offset during an automatic operation indicated it was too high.

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

6530 Volume calibration canceled due to failure (code [n]).

Cause: A problem occurred during volume calibration.

Action: Contact your Micromeritics service representative.

6531 The gas configuration file for [n] is invalid.

Cause: The contents of the gas configuration file are not valid.

Action: Confirm there is sufficient free space on the media receiving the file and that the media is not corrupted). Contact a Micromeritics service representative if this error message continues.

6534 Instrument [n] is not calibrated.

Cause: Calibration information for various analyzer components are missing.

Action: Run the application *Setup* program and reinstall calibration information for the specified unit.

6535 Problem encountered evacuating to target [n], last pressure = [n], elapsed time = [n].

Cause: Evacuation during the manifold dosing operation did not come within the allowed range of the target.

Action: Check that the outlet stage of the gas regulator is within specification. Contact a Micromeritics service representative if this error message continues.

6538 Power failure detected. The sample is in an unknown condition. A run termination will be performed for safety.

Cause: A total power failure occurred and an Uninterruptible Power Supply was not connected while an analysis was in progress.

Action: Allow the analysis to terminate.

6546 Desorption sample pressure less than [n] is not allowed.

Cause: A desorption target pressure less than 0.050 mmHg was requested. A target absolute pressure less than 0.050 mmHg can correspond to various target relative pressures depending on the value of P_0 . For example, if $P_0 = 760$ mmHg, a relative pressure less than $0.050 / 760.0 = 0.0000658$ will result in an error. The analysis will terminate.

Action: Remove the low target relative pressure from the pressure table.

6547 Vacuum group is not configured.

6548 A request to access the shared vacuum system was rejected.

Cause: The vacuum group is incorrectly configured, or a 2060 attempted to access a vacuum system belonging to another vacuum group.

Action: Open the *Vacuum Groups* window. Ensure that only instruments shown in this window are currently powered on and physically connected to the same network. If other 2060s are on the same network, ensure that they are correctly configured or powered off.

6549 The shared vacuum system is not responding to requests for access.

Cause: The instrument managing a vacuum group is either powered off or is not connected to the same network as another instrument in the same vacuum group.

Action: Open the *Vacuum Groups* window. Ensure that all instruments shown in this window are currently powered on and physically connected to the same network.

6550 Opening this valve will prevent an analysis on Unit [n] Serial [n] from proceeding. Open this valve?

6551 The vacuum system is in use by Unit [n] Serial [n]. Open this valve?

6551 The vacuum system is purging. Open this valve?

6551 The vacuum system may be in use by another instrument. Open this valve?

Cause: A manual vacuum valve operation was requested on an instrument while another instrument in the same vacuum group was using the shared vacuum system.

Action: Click **Yes** to interrupt the current vacuum system operation and actuate the vacuum valve. Click **No** to allow the current vacuum system operation to continue; the manual vacuum valve operation will not be performed.

6552 The vacuum system is not responding.

Cause: The instrument managing the vacuum system was unavailable when an analysis was started on another instrument in the same vacuum group.

Action: Open the *Vacuum Groups* window. Ensure that all instruments shown in this window are currently powered on and physically connected to the same network.

6553 **Another instrument is currently using the vacuum system for a manual vacuum operation.**

Cause: An analysis was started on one instrument while another instrument in the same vacuum group had a vacuum valve open either due to a manual vacuum valve operation or to a manifold over-pressure event.

Action: Identify the instrument with the open vacuum valve using the instrument schematic. If this instrument is not currently performing an analysis, manually close the vacuum valve. Return to the analysis wizard that issued the warning, and start the analysis.

6554 **Vacuum system client has been reset.**

6554 **Vacuum system server has been reset.**

Cause: An instrument in a vacuum group is failing to respond to a periodic network connectivity check.

Action: Open the *Vacuum Groups* window. Ensure that all instruments shown in this window are currently powered on and physically connected to the same network.