GALAXY™ 3060

SURFACE AREA AND POROSITY ANALYZER

micromeritics®

ERROR MESSAGES

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Ver 1.x

ERROR MESSAGES FOR THE 3060 GALAXY

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.

2401   FATAL ERROR.

Cause: An internal processing and/or hardware error has occurred during communication with the analyzer.

Action: Contact your Micromeritics service representative.

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 inform-

ation?

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 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 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.

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.

2448   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 has been 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.

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   Deleted entries have been found in this directory. Refreshing the directory information.

Cause: Informational message only indicating the system is looking for directory entries that cannot be found.

Action: Wait a few moments for the system to finish refreshing, then retry the operation again.

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.

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 **[*n*] The instrument is busy performing an operation of which this application is unaware. Do you want to cancel? [Yes, No]**

Cause: During initialization of the application, the status of the analyzer was found to be in a different state than expected.

Action: Click **Yes** to cancel the operation in process allowing the analyzer to reset and continue with initialization. Click **No** to cancel the initialization process.

If this error continues, verify that the files in the application directory structure are not being changed or damaged.

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 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.

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*.

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.

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 analyzer 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   **Unable to establish the TCP connection with the instrument.**

Cause: TCP connection could not be established.

Action: Check the cable connection. Ensure the addresses match those selected in the Control Panel for TCP/IP connections (network properties).

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.

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

2556   **Directory database [*n*] error [*n*].**

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   **Cannot access web page.**

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.

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.

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.

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.

2587   **Sample file [*n*] has no dose incremental table entries.**

Cause: An attempt was made to start an analysis with an empty dose increment table.

Action: Add dose increment entries to the dose increment table in the analysis conditions.

2599   **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.

4002   **Thermal Transpiration correction had no effect.**

Cause: The *Thermal transpiration* 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 Po 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/P$_0$* 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.

4011   Analysis gas in sample file does not match analysis gas in unit.

Cause: An attempt was made to start an analysis using a sample file in which the analysis gas specified does not match the analysis gas entered in the unit configuration.

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

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

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*.

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*.

4026   Cannot calculate Dubinin-Astkahov: 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.

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.

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 Vm. 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   **The data requested on this report are not available. No subreports selected.**

Cause: There is no information in the sample log to report.

Action: A sample file was selected of which no instrument operations were used. Select a sample file with a status of *Prepared*, *Preparing*, *Analyzing*, or *Complete* to obtain a valid sample log report.

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 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.

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.

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.

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 com-

munications port configured in the Setup program. Stop and restart the application. Contact a Micromeritics service representative if this error message continues.

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*], 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 rep-
resentative 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.

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 recon-
nect to the Smart VacPrep either through the Smart VacPrep menu for this instru-
ment 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 oper-
ation.

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

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.

6003   **Unable to read the calibration file [*n*].**

Cause: An attempt to load a previously saved calibration file was unsuccessful.

Action: Ensure the file exists and the file name is entered correctly, then try again.

6004   **Unable to write the calibration file [*n*].**

Cause: An attempt to save the calibration to a separate file was unsuccessful.

Action: Ensure the file exists and the file name is entered correctly, then try again.

6016   **Dosing manifold from valve [*n*] failed.**

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

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

Cause B: The analysis gas cylinder is empty.

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

6017   **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.

6018   **Volume dosed exceeded [*n*]. Analysis is canceled.**

Cause: There is a problem with the analyzer's calibration.

Action: Use the Setup program to reinstall the calibration files. Contact your Micromeritics service representative.

6019   **Elevator failed to reach upper limit switch.**

Cause A: There is an obstruction in the elevator path.

Action A: Clear all obstructions and restart the analysis.

Cause B: Ice is present in either the bottom or the neck of the dewar, preventing the elevator from rising completely.

Action B: Check the dewar, remove ice, then restart the analysis.

Cause C: If results for Actions A and B failed, contact a Micromeritics service representative.

Action C: There is an obstruction in the elevator path.

6020   **Warning, servo valve performance is out of specification.**

Cause: The servo valve tried to dose to a pressure but was unable to reach it within specification. The analysis will continue.

Action: At the next appropriate time, calibrate the servo valve to bring it back within specification.

6021   Servo calibration failed.

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

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

Cause B: The analysis gas cylinder is empty.

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

6024   Evacuation failed.

Cause: While attempting to zero the pressure transducers, the instrument was unable to evacuate to a pressure of less than 1 mmHg. This may be due to a leak or a bad calibration.

Action A: Check the sample tube fitting and ensure that it is securely attached to the port.

Action B: Use the Setup program to reinstall the calibration files.

6025   Target pressure [n] exceeded maximum manifold pressure of [n]. Analysis is canceled.

Cause: An absolute pressure greater than (pressure) units was attained that exceeded the specified maximum manifold pressure.

Action: The analysis was canceled. All previously collected data were stored. Change the maximum manifold pressure value in the *Adsorptive Properties* file.

6026   Psat gas is not condensing.

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

Action A: Refill the dewar, then try the operation again.

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.

6027   There is no Nitrogen attached to the unit.

Cause: A calibration requiring nitrogen was attempted but the software does not recognize that nitrogen is attached.

Action: Ensure that a nitrogen gas cylinder is installed at one of the analysis ports, go to *Unit > Unit Configuration*, then enter *N2* for the appropriate valve.

6028   **The backfill gas in sample file does not match any gas in the unit.**

6029   **The Po in the sample file does not match any gas in the unit.**

Cause: An attempt was made to start an analysis with a gas that is not connected to the instrument or has not been designated in the software.

Action: Ensure the gas is connected to the instrument, then select ***Unit [n] > Unit Configuration*** to tell the application that the gas is connected.

6030   **Dosing method does not match analysis type. Choose** *Sample Analysis* **from the Unit menu or change the dosing method to** *From Psat tube***.**

6030   **The pressure table for this sample has a "Last Low Pressure" of [n]. This may be less than atmosphere plus the maximum head pressure.**

Cause: A file was selected for a krypton analysis that has *Normal* selected for the *Dosing Method*. *Normal* is for standard analyses only.

Action: Open the sample file and change the *Dosing Method* to *From Psat tube* or select a different file for the analysis.

6031   **Dosing method does not match analysis type. Choose** *Krypton Analysis* **from the** *Unit* **menu or change the dosing method to** *Normal***.**

Cause: A file was selected for a standard analysis that has *From Psat tube* selected for the *Dosing Method*. *From Psat tube* is for krypton analyses only.

Action: Open the sample file and change the *Dosing Method* to *Normal* . Otherwise, select a different file for the analysis.

6032   **Template file [n] for the selected analysis type does not exist. Select another analysis type.**

Cause: A program piece required to run the PCP analysis is missing. Applies when in *Service Test Mode*.

Action: Re-install the software.

6033   **Krypton gas is not condensing in the Psat tube [n].**

Cause A: The krypton gas may be contaminated.

Action A: Evacuate the krypton gas inlet line.

Action A: Manually verify the saturation pressure of the krypton gas:

       1. Evacuate the psat tube.

2. Backfill with krypton gas to 20 mmHg.

3. Raise the dewar.

These steps should condense the krypton gas to a pressure below 3 mmHg.

Cause B: The dewar does not contain enough cryogen.

Action B: Refill the dewar.

6034   **Zeroing of a transducer failed. Analysis canceled.**

Cause: The transducer did not respond correctly.

Action: Contact your Micromeritics service representative.

6035   **Manifold over-pressure detected (pressure: [*n*], max allowed: [*n*]).**

Cause: A manifold pressure over 1100 mmHg was detected.

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

6040   **Failed to reach pressure dosing through servo. Calibration canceled.**

Cause A: There was insufficient gas pressure to calibrate for matching transducers. The gas is not connected or the tank is almost empty.

Action A: Ensure the gas is connected properly and assigned correctly in the *Unit Configuration* window. Replace the tank if necessary.

Cause B: The gas valve is not working properly.

Action B: Contact your Micromeritics service representative.

6041   **Servo Calibration failed.**

6042   **Master pressure transducer calibration failed. Offset is out of range.**

6043   **Port 1 pressure transducer calibration failed. Offset is out of range.**

6044   **Port 2 pressure transducer calibration failed. Offset is out of range.**

6045   **Port 3 pressure transducer calibration failed. Offset is out of range.**

6046   **Po pressure transducer calibration failed. Offset is out of range.**

6047   **10 torr pressure transducer calibration failed. Offset is out of range.**

6048   **Master pressure transducer calibration failed. Scale is out of range.**

6049   **Port 1 pressure transducer calibration failed. Scale is out of range.**

6050   **Port 2 pressure transducer calibration failed. Scale is out of range.**

6051   **Port 3 pressure transducer calibration failed. Scale is out of range.**

6052   **Po pressure transducer calibration failed. Scale is out of range.**

6053   **10 torr transducer failed. Scale is out of range.**

Cause: There is a problem with the analyzer's calibration.

Action: Use the Setup program to reinstall the calibration files. Contact your Micromeritics service representative.

6054   **When dosing from the Psat tube, [*n*] must be entered or calculated.**

Cause: The adsorptive properties for the adsorptive used in a sample specify *From Psat tube* as the dosing method. This dosing method is only compatible with an entered or calculated P_0.

Action: If the dosing method is incorrect, change the dosing method for the sample in the Adsorptive Properties to *Normal*. If the dosing method is correct, change the Po option in the Po and Temperature Options to *Entered P_0* or *Calculate P_0*.

6055   **Krypton analysis cannot be performed because the instrument is not a Krypton-enabled system.**

Cause: Krypton analysis was selected but the required 10 torr transducer was not detected.

Action: Contact your Micromeritics service representative.

6055   **Krypton analysis cannot be performed because the instrument is not a Krypton-enabled system.**

Cause: Krypton analysis was selected but the required 10 torr transducer was not detected.

Action: Contact your Micromeritics service representative.

6056   **The Psat gas must be the same as the analysis gas if [*n*] is calculated from Psat and the analysis gas is dosed from the Psat tube.**

Cause: Dosing from the Psat tube is selected in the adsorptive properties and the analysis conditions. P_0 and temperature options specify that P_0 should be calculated from the Psat of a gas, but the Psat gas differs from the analysis gas.

Action: Select a gas for the Psat measurement that has the same mnemonic as the analysis gas. Typically, the analysis and Psat gas will be krypton but the Psat gas will include the solid Psat vs T table.

6057   **Opening this valve will prevent an analysis on Unit [*n*] Serial [*n*] from proceeding. Open this valve?**

6058   **The vacuum system is in use by Unit [*n*] Serial [*n*] . Open this valve?**

6059   **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.

6060   **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. Cycle power on the instrument.

6061   **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: Close any manually opened vacuum valves on other units before starting an analysis.

6062   **Vacuum group is not configured.**

6063   **A request to access the shared vacuum system was rejected.**

Cause: The vacuum group is incorrectly configured, or a 3060 attempted to access a vacuum system belonging to another vacuum group.

Action: Ensure that only one 3060 is physically connected to the network used by this instrument. If other 3060s are on the same network, ensure that they are correctly configured or powered off. Cycle power on the instrument.

6064   **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: Ensure that only one 3060 is physically connected to the network used by this instrument. If other 3060s are on the same network, ensure that they are correctly configured or powered off.

6065 **Vacuum system client has been reset.**

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

Action: Ensure that only one 3060 is physically connected to the network used by this instrument. If other 3060s are on the same network, ensure that they are correctly configured or powered off. Cycle power on the instrument.

6065 **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. Cycle power on the instrument.

6557 **File [*n*] already selected for the analysis.**

Cause: The same sample file is already assigned to a different port for this analysis.

Action: Select a different sample file.

6558 **Gas [*n*] in sample file [*n*] does not match any gas in the unit.**

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

Action: If the wrong adsorptive was selected in the sample file, change the adsorptive in the file.

6559 **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.

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.