

AUTOCHEM[®] HP 2950

AUTOMATED HIGH PRESSURE CATALYST CHARACTERIZATION SYSTEM



micromeritics[®]

**Effective Solutions for
Material Characterization**

ERROR MESSAGES

Dec 2018

ERROR MESSAGES

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

2201 **Cannot execute report subsystem.**

2202 **Cannot execute Peak Editor subsystem.**

Cause: The application for the report (or Peak Editor) subsystem has been corrupted and cannot be started.

Action: Reinstall the AutoChem application.

2204 **Communication attempt with [n] failed [n]. Please check application directory for file.**

Cause: A file necessary for reporting is missing.

Action: Re-install the application.

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: An application error occurred when the file was accessed.

Action C: Contact your Micromeritics Service Representative.

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

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

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 space to perform the operation.

Action B: Copy files not used regularly to an 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 have been added to this directory by some function other than the analysis application.

Action: Click **Yes** to update the directory information with data from each new file. This operation may take a minute. Click **No** to locate the file manually. This option may be feasible if a large number of files have been copied into the directory and the file name is known.

2434 File [n] — Subset [n] wrote 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: Enter a valid path name (including the proper extension), then press **Enter**.

2437 File name [n] does not exist.

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

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

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 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.

- 2452** **Attempt to write MICATTR.DIR in read only mode. [n]**

- 2453** **Attempt to append MICATTR.DIR in read only mode. [n]**

Cause: The *Read-Only* attribute is turned on in the application's MICATTR.DIR file (this file exists in each folder containing sample or parameter files).

Action: Use Windows Explorer to access the folder containing the MICATTR.DIR file, then disable the *Read-Only* option.

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- 2454** Too many selections for a print-to-file operation. Only the first [n] selections will be processed. Please reselect the remainder.
- 2455** Too many selections for an export-to-file operation. Only the first [n] selections will be processed. Please reselect the remainder
- Cause:* Too many files were selected for this operation.
- Action:* Select only the number of files specified in the message.
- 2456** Insufficient file handles available. Application cannot continue.
- Cause:* More than 50 files are open at the same time.
- Action:* Refer to a Windows operating system manual then set the limit for open files to 50 or greater. Alternatively, close any unused open files.
- 2457** Results cannot be displayed. More than [n] windows are currently displaying or printing results.
- Cause:* Too many windows are open in the application.
- Action:* Close some of the open windows.
- 2458** An instrument is performing a critical operation. Wait a few moments before exiting the application.
- Cause:* An attempt was made to exit the application while the analyzer was performing a critical operation. This operation must be completed before the application can be exited.
- Action:* Wait a short time and attempt to exit the application again.
- 2459** An instrument is busy. A delay in restarting this application could result in loss of new data. Continue with program Exit?
- Cause:* An attempt was made to exit the application while an analysis was in progress. While this is possible, the data collected when the application is inactive will not be permanently recorded until the application is restarted. A power failure to the analyzer could cause some data to be lost. Continued data collection may also exhaust the memory of the controller.
- Action:* If not concerned with the potential for loss of data should a power failure occur, click **Yes** to continue; otherwise, click **No**.
- 2460** Fatal Communications error on [n].
- Cause:* There was a fatal error in communication between the application and the software in the analyzer. All displays for that analyzer will be closed.
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Action: Ensure that the analyzer is connected to the computer on the communications port configured in the *Setup* program. Stop and restart the analyzer application. Contact your Micromeritics Service Representative.

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

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

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

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

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

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 *Window* menu item for a list of all open windows.

- 2483** **An analysis cannot be performed on [n]. It is open for editing and contains errors.**
Cause: An attempt was made to use a sample file containing errors that is currently open.
Action: Go to the window containing the file, correct the errors, then save it.
- 2484** **The edit session for [n] must be saved before the analysis. Save changes and continue with the analysis?**
Cause: An attempt was made to start an analysis using a file that contains unsaved changes and is open for editing.
Action: Click **Yes** to save the changes, then proceed with the analysis. Click **No** to cancel the analysis, then continue editing the sample file.
- 2485** **The service test file has an invalid status and cannot be used for this analysis.**
Cause: The selected file has a status other than *No Analysis*.
Action: Select a file, or create a new one and click **Replace All** to copy parameters from the file originally selected.
- 2486** **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 for editing.**
Cause: The specified file is open for editing.
Action: Check the *Window* menu item to locate the other edit session.
- 2489** **File [n] cannot be opened for writing.**
Cause: The specified file in a *Save As* operation is open.
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 application.

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

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

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

2492 This field's entry is invalid.

2493 An entry is required for this field.

Cause: The highlighted field contains an invalid entry.

Action: Check the entry and correct the error.

2494 Value is out of the valid range.

2495 Enter a value between [n] and [n].

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

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

2496 Invalid number.

2497 This field contains an invalid character.

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

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

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

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

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

2499 Sequence number must contain at least 3 digits.

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

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

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

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

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

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.

Action: Close one or more windows. Contact a Micromeritics service representative if this error message continues.

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.

2503 Error converting file [n]. Cannot create DIO intermediate file.

Cause: An error occurred while printing a report to file.

Action: An attempt was made to replace a file that is read only or the computer login does not have permission to do so. Contact your IT Department.

2504 Cannot create output file for sample [n].

Cause: There may be insufficient disk space.

Action: Ensure that sufficient space is available. Contact a Micromeritics service representative if this error message continues.

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

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

Action: Contact your Micromeritics Service Representative.

2506 Output device [n] is not installed. Printing cannot be accomplished.

2508 Overlay [n] was not found. It will not be included in the reports.

Cause: The specified overlay file could not be found.

Action: Ensure the file specified as an overlay exists.

2509 Error opening file [n]. Reports cannot be produced.

Cause: An error occurred while the application was opening a file necessary to the report operation.

Action: Use the name given in the error message to investigate. Contact your Micromeritics Service Representative.

2510 Error parsing reports from file [n]. Reports cannot be produced.

Cause A: One or more data entry fields in the sample file may contain an invalid character.

Action A: Review the data entry fields, then remove the invalid character.

Cause B: The system was unable to create the usual temporary files during the report, possibly due to insufficient disk space.

Action B: Check the available hard disk space .

Cause C: An internal processing error occurred.

Action C: Contact your Micromeritics Service Representative.

2511 Print job [n] has been canceled due to insufficient disk space. Delete unnecessary files and restart the report.

Cause: The media drive does not have required space for the temporary file.

Action: Delete unnecessary files from the disk. At least five megabytes of free space is required for normal operation.

2512 Print job [n] canceled.

Cause: The print job was canceled by the operator.

Action: None required.

2513 Unable to read the calibration file [n].

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

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

2514 Unable to write the calibration file [n].

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

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

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 a Micromeritics service representative if this error message continues.

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

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

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

2533 Mass initialization failed.

Cause: The analyzer initialization found that the analyzer hardware configuration did not

meet the minimum requirements.

Action: Contact your Micromeritics Service Representative.

2534 Error opening file[n] for printing. Error Code [n].

Cause: An error occurred in the selected file for print output.

Action: Ensure that sufficient disk space is available.

4200 At least two experiments are needed for this report.

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

Action: Open the sample file and choose at least two experiments for this report.

4202 Null connection, unable to start transaction.

4203 Advise for unknown transaction received.

4204 Unable to create DDE conversation [n].

4205 Unable to create DDE transaction [n].

4206 Callback for unknown transaction received.

4207 DDE error number [n].

Cause A: A DDE operation was not properly executed.

Action A: Ensure that the other application is loaded and in a state which supports DDE operations. If the problem persists, exit all applications and Windows, then restart the applications.

Cause B: The DDE command was not specified correctly.

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

4208 An error occurred while loading the application control information. Data entry cannot be performed. Code [n].

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

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

4209 New steps cannot be inserted in the synopsis at any point that precedes the

step that is currently being executed.

Cause: The analysis has already progressed past the point at which you attempted to insert a step; therefore the step would not be performed.

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

4210 No new steps may be inserted. Analysis is complete.

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

Action: The analysis conditions for a completed sample cannot be changed. Create a new sample file and click **Replace** to copy the values from the completed file. Add the new step to the new sample file. A new sample can be analyzed using the new (edited) sample file.

4213 This analysis can only be executed when Service Test mode is enabled.

Cause: An attempt was made to analyze a sample using an analysis conditions set which may only be used under the supervision of an authorized Micromeritics Service Representative. These analysis conditions are provided to assist in the diagnosis of certain analyzer problems.

Action: Contact your Micromeritics Service Representative.

4214 This analysis exceeds the maximum allowed length.

Cause: The current analysis conditions script contains the maximum number of allowed steps (1000). Another step cannot be added.

Action: Divide the analysis steps into two or more sample files. Allow the sample tube to remain undisturbed on the analyzer while repeatedly starting analyses using these sample files in sequence. When steps are divided between sample files, plan the divisions so that the ending conditions of one file and the initial experiment conditions of the next file facilitate the continuing analysis. The data from the various sample files can be integrated using the Peak Editor since multiple sample information files can be edited at once. Note that the maximum number of experiments that can be loaded into Peak Editor at one time (regardless of the number of sample files) is 16.

4219 At least one experiment must be selected and at least one box checked.

Cause: An attempt was made to export the collected data from a sample file, but not all of the required fields on this window have been completed correctly.

Action: Select at least one experiment to be exported and check either *Peak Summaries*, *Measurements*, or both.

4220 Unexpected I/O error accessing data for an experiment in sample [n].

Cause: An unexpected media error occurred while attempting to access experiment data.

Action: The media drive may have failed or may be corrupted. Run diagnostics.

4221 Cannot append to an experiment in sample [n]. Maximum size may be exceeded.

Cause: *Save As* was selected from the experiment editor and elected to append the loaded experiments to an existing file. Either the existing sample file already contains the maximum number of allowed experiments or the media drive is full.

Action: Verify that at least 20 megabytes of disk space are available on the target media drive and that the target sample file contains fewer than 20 experiments.

4222 The Active Metal Table Options dialog box does not specify a stoichiometry factor for element [n]. One (1.0) was substituted for this value in the calculations.

Cause: The *Pulse Chemisorption* report was selected and requires a valid stoichiometry factor for calculations. The *Active Metal* table does not contain a valid stoichiometry factor for the specified element.

Action: Open the sample file in *Advanced* presentation. Click the *Report Options* tab. Select the *Pulse Chemisorption* report, then click **Edit**. Edit the *Active Metal* table for this file, specifying a valid stoichiometry factor for the metal named in the error message. Save and close the file, then print the report.

4223 No element in the Active Metals Table Options has a '% of Sample weight' value greater than zero.

Cause: The *Pulse Chemisorption* report was selected. None of the metals in the *Active Metal* table are designated as being part of this sample.

Action: Edit the *Active Metal* table and specify a *% of Sample Weight* greater than zero for at least one metal.

4225 No reports were selected.

Cause: A report was requested, but there are no reports selected in the sample file.

Action: Open the sample file and edit the report options. Ensure that at least one report type is selected.

4226 No experiments were selected for inclusion in this report.

Cause: The report type selected for printing did not have experiments for inclusion in the

report. No experiments were selected for this report

Action: Open the sample file in *Advanced* presentation. Select the *Report Options* tab then select reports in the *Selected Report* list box. Click **Edit** and choose the experiments to include in the report. If none of the experiments within the sample file are applicable to this type of report, deselect the report type from the list shown on the *Report Options* window.

4227 The data requested on this report are not available.

Cause: The data requested on a report, such as the Auxiliary 1 signal, are not contained within any of the selected experiments.

Action: Open the sample file in *Advanced* presentation. Select the *Report Options* tab select or deselect the report type in the *Selected Reports* list box. If selecting a report type, click **Edit**. Change the options on the editing window so that they request data contained within the file.

4228 This sample does not contain an experiment which can be used in a [n] calibration.

Cause: An attempt was made to load a sample which does not have valid peaks for this type of calibration into the calibration editor. A *Gas Concentration* calibration requires a TCD Calibration experiment. A *Spread Peaks* calibration requires a *Vapor Calibration* experiment. A *User Defined Peaks* calibration will accept any experiment type with valid peaks defined

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

4229 The calibration data for experiment [n] may already be loaded. You may delete duplicates after loading.

Cause: Before reloading the peak information for a sample file into the TCD calibration window, delete all previously loaded peaks.

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

4232 At least two peaks are required to determine heat of desorption.

Cause: The heat of desorption is determined by fitting data obtained at different temperature ramp rates. At least two data points must be present for the fit to be performed.

Action: Repeat the analysis with at least two experiments that have different ramp rates. Refer to the analyzer Operator Manual for information on performing a TPD analysis.

4233 Default mass spectrometer file directory [n] is invalid. Resetting to the install-

ation directory.

Cause: A working directory specified in the .INI file is invalid. The directory may have been deleted or moved to a different location.

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

4234 File [n] is not a mass spectrometer data file.

Cause: A file was selected that does not contain appropriate mass spectrometer data.

Action: Select a file that contains data collected by the Pfeiffer Vacuum (formerly Balzers) mass spectrometer using the QuadStar application .

4235 The mass spectrometer file [n] cannot be opened for reading.

Cause: A file access error occurred when an attempt was made to access the mass spectrometer file.

Action: Ensure that a valid file name was selected and that you have the required permissions to read mass spectrometer files.

4236 The calibration data file [n] was not created with this instrument.

Cause: An attempt was made to load a calibration file containing data collected on an analyzer different from the current one.

Action: If selecting a TCD calibration, choose a file containing calibration data collected on the current analyzer. If selecting a mass spec calibration, choose a file containing imported mass spec data.

4236 The calibration data file [n] was not created from an imported mass spec file.

Cause: An attempt was made to load a calibration file containing data collected on an analyzer different from the current one.

Action: If selecting a TCD calibration, choose a file containing calibration data collected on the current analyzer. If selecting a mass spec calibration, choose a file containing imported mass spec data.

4237 Peak processing cannot be performed. The mass spectrometer data cannot be imported.

Cause: The mass spectrometer data did not include identifiable peaks.

Action: Select a different mass spectrometer file.

4238 Peak Editor cannot be started.

Cause: An attempt was made to open the Peak Editor, but one of its components is missing.

Action: Reinstall the application

4239 A calibration from instrument S/N [n] is required to calibrate experiment [n].

Cause: To associate a calibration file with a sample file, both files' analyses must have been performed on the same analyzer. The analyzer must be connected to the computer for its calibration files to be available.

Action: Ensure that the analyzer with the designated serial number is connected to the computer and is active.

4240 Error writing calibration information. The calibration of experiment [n] cannot be changed.

Cause: The calibration information for an experiment could not be changed because of an error writing to the media drive.

Action: The media drive may have failed or it may be corrupt. Run diagnostics. Check that no other application has write access to the sample file.

4241 TCD Calibration is required for the calculations of this report.

Cause: This report requires that TCD calibration be applied to the sample file.

Action: BET, Langmuir, and Total Pore Volume reports require inclusion of a TCD calibration. Use the Edit Peak view of the Peak Editor to assign a TCD calibration to the file.

4243 Ambient Temperature should be > 10 °C.

Cause: The value for the ambient temperature is out of range. It is possible that the sample file has been corrupted.

Action: Contact your Micromeritics Service Representative.

4244 Average Syringe Area should be > 0.

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

Action: In the Peak Editor, insert or edit peaks, if possible.

4245 The peak table contains [nn] peaks. Exactly 6 peaks are required for loop calibration.

Cause: The number of peaks for the Loop calibration is less than six; six are required.

Action: Use the Peak Editor to edit the peaks. Insert enough peaks to total six.

4246 There are no peaks available for this experiment.

Cause: An attempt was made to generate a report on an experiment that has no peaks available.

Action: Open the Peak Editor and generate peaks for this experiment.

4375 Cannot insert peak with negative height.

Cause: An attempt was made to insert a peak below the peak set's baseline.

Action: Insert the new peak above the peak set's baseline and/or adjust the baseline.

4376 Auto Fit cannot be executed unless a valid peak set is selected.

Cause A: An attempt was made to auto-fit a peak set, but there is no peak set currently active.

Action A: Click the required peak or peak set in the peak fit table to select a peak set.

Cause B: An attempt was made to auto-fit, but there are no peak sets in the experiment.

Action B: Insert a new peak set into the experiment, then select *Auto Fit* to find all peaks in the set.

4377 This operation cannot be performed on a negative peak set.

Cause A: An attempt was made to insert a peak in a negative peak set.

Cause B: An attempt was made to move the boundaries of a negative peak set.

Cause C: An attempt was made to change the shape of a peak found within a negative peak set.

Cause D: An attempt was made to optimize the peaks of a negative peak set.

Cause E: An attempt was made to auto-fit the peaks of a negative peak set.

Action: Invert the graph to make the peak set positive, then repeat the operation.

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

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

low flow rates may be unacceptable for some applications.

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

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

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

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

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

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

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

4627 No valid sample files were selected.

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

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

4630 The first peak is larger than the last. This report assumes inverse chemisorption.

Cause: This message appears on the *Pulse Chemisorption* report when an inverse chemical adsorption experiment is reported.

Action: None required. This message is informational only. If this experiment is not actually an inverse chemical adsorption experiment, it is not appropriate for this type of data reduction.

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

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

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

6219 Warning, the instrument [n] is uncalibrated.

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

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

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

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

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

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

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

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

6226 No instrument calibration is available on [n].

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

Action: Load the factory-supplied calibration file.

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

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

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

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

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

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

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

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

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

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

Action B: Contact your Micromeritics Service Representative.

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

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

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

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

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

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

6267 Inter-application message cannot be delivered. Select Continue to resume analysis.**6268 Analysis paused. An inter-application message cannot be delivered.****6269 Analysis paused. An inter-application message failed. The Receiver was busy.****6270 Analysis paused. An inter-application message failed. The Receiver refused the request.****6271 Analysis paused. An inter-application message failed for an unknown reason.**

Cause A: A DDE operation was not properly executed.

Action A: Ensure that the other application is loaded and in a state which supports DDE operations. If the problem persists, exit all applications and Windows, then restart the applications.

Cause B: The DDE command was not specified correctly.

Action B: Review the DDE server application manual for the specific command and enter it cor-

rectly in the DDE command step. If the problem persists, exit all applications and Windows, then restart the applications.

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

Cause: An internal error has occurred.

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

6300 Warning. The back pressure heat zone has been reporting an invalid temperature for one minute.

Cause A: Heater cable is loose or disconnected

Action A: Connect the heater cable

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

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

6301 Warning. The back pressure rotary valve did not operate correctly.

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

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

6302 Warning. Calibration of the back pressure heat zone failed. Previous calibration will be used.

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

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

6303 Warning. An attempt to operate a valve has been prevented due to high pres-

sure code [n].

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

Action A: Repeat the calibration, ensuring that the entered temperatures are accurate.

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

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

6304 Warning. A back pressure operation time-out has occurred.

Cause: More than 30 minutes has elapsed since the beginning of a back-pressure operation without the pressure target being reached.

Action: Check the gas regulator pressure.

6305 Error. Operation suspended. The back pressure zone has been reporting an invalid temperature for one minute.

Cause A: Heater cable is loose or disconnected.

Action A: Connect the heater cable.

Cause B: A failure has occurred in the hardware or electronics.

Action B: Establish an Idle state in the analyzer, power OFF the analyzer. Power ON the analyzer. Allow the controller application to be initialized. If the problem recurs after the application has been active for about one minute, contact your Micromeritics Service Representative. If the problem is corrected, resume or cancel the analysis. Before resuming the analysis, re-establish the TCD temperature using manual control. After enabling manual control, click on the detector heat zone and set the temperature to the correct value.

Cause C: The heat zone is calibrated incorrectly.

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

6306 Error. Operation suspended. The back pressure rotary valve did not operate correctly.

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

Action: Use manual control to try to operate the valve. If the problem persists, lower the temperature of the associated heat zone and then try the operation again. If this is not successful, exit the application, power OFF the analyzer. After a few seconds, power ON the analyzer and then restart the application. The valve should be re-initialized. Check

that the valve moves freely using manual control. Restart the analysis. Contact a Micromeritics service representative if this error message continues.

6307 Error. Operation canceled. An attempt to operate a valve has been prevented due to high pressure code [n].

Cause: While a portion of the analyzer was at an elevated pressure an attempt was made to change a valve in the elevated region.

Action: Do not attempt to operate a valve when it is in the elevated pressure region.

6308 Error. Operation suspended. A back pressure operation time-out has occurred.

Cause: More than 30 minutes has elapsed since the beginning of a back-pressure operation without the pressure target being reached.

Action: Check the gas regulator pressure.

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

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

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

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

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

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

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

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

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

6410 Warning. The analysis heat zone has been reporting an invalid temperature (reading) for one minute.

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

Cause A: Heater cable is loose or disconnected.

Action A: Connect the heater cable.

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

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

6415 Warning. The furnace thermocouple is not connected.

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

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

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

Action B: Contact your Micromeritics Service Representative.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6434 Error. Operation suspended. The cold trap heat zone has been reporting an invalid temperature (reading) for one minute.

Cause: Heater cable is loose or disconnected.

Action A: Connect the heater cable.

Cause B: A failure has occurred in the hardware or electronics.

Action B: Establish an Idle state in the analyzer, power OFF the analyzer, then power it back ON. Restart the application. If the problem recurs after the application has been active for about one minute, contact your Micromeritics Service Representative. If the problem is corrected, resume the analysis; otherwise, cancel it. Before resuming the analysis, re-establish the TCD temperature using manual control. After enabling manual control, click on the detector heat zone and set the temperature to the correct value.

Cause C: The heat zone is calibrated incorrectly.

Action C: Contact your Micromeritics Service Representative.

6438 Error. Operation suspended. The furnace thermocouple is not connected.

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

Action A: Connect the cable (the connector is shaped so that it cannot be improperly inserted).

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

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

6439 Error. Operation suspended. This sample thermocouple is not connected or operating properly.

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

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

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

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

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

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

Cause: An application error has occurred.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[n].

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

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

Cause: An application error has occurred.

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

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

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

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

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

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

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

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

Cause: A application error has occurred

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

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

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

Cause: A hardware error has occurred.

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

6456 Error. Operation suspended. A heat zone code [n] did not reach its target of [n] (current temperature = [n]) within the allowed time of [n] minutes, where [n] is detector, loop, sample, cold trap, back pressure, vapor, flask, or reflux.

6457 Error. Operation suspended. The furnace did not reach a temperature between [n] and [n] in the allowed time of [n] minutes.

6458 Error. Operation suspended. Sample temperature equilibration is not allowed because sample temperature control is not active code [n].

Cause: A hardware error has occurred.

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

6459 Warning. A gas flow blockage has been detected, return to atmospheric pressure is being done.

6460 Operation canceled. A gas flow blockage has been detected, return to atmospheric pressure is being done.

Cause: The difference in pressure readings of the analyzer's pressure transducer and the back-pressure controller's transducer has been above 50 psia for more than 10 seconds.

Action: The analysis is canceled and the pressure control is disabled to allow excess gas to vent from the system. Take extreme caution before removing the sample tube. Excess pressure may be stored in the sample tube and may present a dangerous condition. Appropriate personal protection should be used when removing the sample tube.



6461 Operation canceled. The furnace was opened during an analysis, return to atmospheric pressure is being done.

Cause: The furnace door was opened while an analysis was active.

Action: The analysis is canceled and the pressure control is disabled to allow excess gas to vent from the system. Take extreme caution before removing the sample tube. Excess pressure may be stored in the sample tube and may present a dangerous condition. Appropriate personal protection should be used when removing the sample



tube.

6463 **Warning. The Cold Trap rotary valve did not operate correctly.**

6464 **Warning. The Preparation rotary valve did not operate correctly.**

6465 **Warning. The Inject rotary valve did not operate correctly.**

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

If valve referenced in message is:

Preparation rotary valve

Inject rotary valve

It is also known as:

Analysis valve

Loop valve

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

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

Cause: An attempt to control manually the KwikCool option failed because the KwikCool option was not detected at the time the control was attempted. If analysis is resumed before the problem is corrected, the current step will NOT be completed.

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

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

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

6470 **Error. Operation suspended. The Inject rotary valve did not operate correctly.**

Manually toggle the valve to restore proper operation.

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

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

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

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

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

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

6473 Warning. The CryoCooler option is not installed.

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

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

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

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

stable.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

restriction, if possible. Contact your Micromeritics service representative if necessary. If the problem is corrected, either resume or cancel the analysis. If resuming the analysis, re-establish the TCD temperature using manual control, then click on the detector heat zone and set the temperature to the correct value.

6485 Instrument is connected to a Eurotherm furnace.

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

Action: Contact your Micromeritics Service Representative.

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