MicroActive™

Interactive Data Analysis Software

Error Messages

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CORPORATE PROFILE

Micromeritics Instrument Corporation is a leading global provider of solutions for material characterization with best-in-class instrumentation and application expertise in five core areas: density; surface area and porosity; particle size and shape; powder characterization; and catalyst characterization and process development. Founded in 1962, the company is headquartered in Norcross, Georgia, USA and has more than 300 employees worldwide. With a fully integrated operation that extends from a world class scientific knowledge base through to in-house manufacture, Micromeritics delivers an extensive range of high-performance products for academic research and industrial problem-solving. The implementation of tactical partnerships to incubate and deliver valuable new technologies exemplifies the company's holistic, customer-centric approach which extends to a cost-efficient contract testing laboratory – the Particle Testing Authority (PTA). The strategic acquisitions of Freeman Technology Ltd and Process Integral Development S.L. (PID Eng & Tech) reflect an ongoing commitment to optimized, integrated solutions in the industrially vital areas of powders and catalysis.

Freeman Technology (Tewkesbury, UK) brings market-leading powder characterization technology to Micromeritics' existing portfolio of particle characterization techniques. The result is a suite of products that directly supports efforts to understand and engineer particle properties to meet powder performance targets. With over 15 years of experience in powder testing, Freeman Technology specializes in systems for measuring the flow properties of powders. In combination with detailed application know-how these systems deliver unrivalled insight into powder behavior supporting development, formulation, scale-up, processing and manufacture across a wide range of industrial sectors.

PID Eng & Tech (Madrid, Spain) complements Micromeritics' renowned offering for catalyst characterization with technology for the measurement and optimization of catalytic activity, with a product range that extends to both standard and bespoke pilot scale equipment. Launched in 2003, PID Eng & Tech is a leading provider of automated, modular microreactor systems for the detailed investigation of reaction kinetics and yield. These products are supported by a highly skilled multidisciplinary team of engineers with in-depth expertise in the design, construction and operation of laboratory units and process scale-up.

The Particle Testing Authority (PTA) provides material characterization services for fine powders and solid materials using Micromeritics' instrumentation alongside complementary solutions from other vendors. With the certification and expertise to operate across a wide range of industries the PTA offering runs from single sample analysis to complex method development, method validation, new product assessment, and the analytical support required for large scale manufacturing projects. An experienced, highly trained team of scientists, engineers, and lab technicians works closely with every client to ensure that all analytical requirements are rapidly and responsively addressed.

Micromeritics has a strong global network with offices across the Americas, Asia, and Europe complemented by a dedicated team of distributors in additional locations. This ensures that local, knowledgeable support is available for every customer, in academia or industry. Micromeritics works across a truly diverse range of industries from oil processing, petrochemicals and catalysts, to food and pharmaceuticals, and at the forefront of characterization technology for next generation materials such as graphene, metal-organic-frameworks, nanocatalysts, and zeolites. Engineering solutions that work optimally for every user is a defining characteristic of the company.

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ERROR MESSAGES

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

4154   [n] could not be read.

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

Action: Select a different file.

4155   [*n*] does not have physisorption data.

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

Action: Select only files from physisorption analyses.

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

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

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

4157   The selected data sets do not have enough overlap in the adsorption branch.

4157   The selected data sets do not have enough overlap in the desorption branch.

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

Action: Select files with overlapping pressure ranges.

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

Cause: Scanning data must include one sample file with a full isotherm. This isotherm must have one adsorption branch and one desorption branch. The pressure ranges for these branches must be wider than those of any other selected sample file.

Action: Select a file with a full isotherm along with the scanning data files.

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

Cause: Scanning data must be bounded by the full isotherm. This error is shown if any quant-

ity adsorbed in a scanning adsorption branch falls below the full adsorption isotherm, or if any quantity adsorbed in a scanning desorption branch exceeds the full desorption isotherm, by more than 5%. This check is done after matching the scanning data to the full isotherm.

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

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

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

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

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

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

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

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

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

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