

Fibermetric



Better, Faster Fiber Analysis

Now, direct observation and measurement of micro and nano fibers is faster, better and easier than ever before, with the improved Fibermetric application.

In combination with the Phenom™ G2 pro desktop scanning electron microscope, the Fibermetric application allows you to produce accurate size information from micro and nano fiber samples. Recent developments enabled us to extend the range of measurements of the Fibermetric application providing even more in-depth information. It is possible to measure and analyse complicated fiber structures, ranging from spunbond and electrospun fibers to the melt blown type fibers.

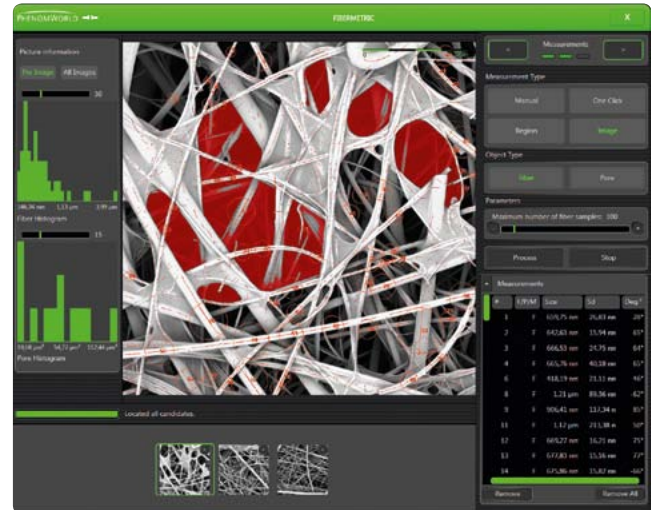
The automated image characterization generates hundreds of measurements in seconds. In addition to more accurate data acquisition, the automated measurements of the Fibermetric application guarantee a fast return on investment (time savings compared to previous manual measurements; operator independent; more consistent data). The automated feature and fiber size detection has made Fibermetric even more user friendly and further improved the time to result. With the Fibermetric it has become possible to measure and analyze samples with large fiber diameter differences.

Fibermetric automatically analyses hundreds of data points that provide solid statistical analysis. This data is displayed in various formats like an interactive fiber and pore size distribution histogram. All data are exportable to common formats for offline customized analysis.

Fibermetric allows the user to export the histogram faster in a variety of formats. The functionality of creating screenshots has been extended, making the actual representation ready to be used for reporting and in presentations. The measurement algorithms have been improved, providing more accurate and reliable outcome of the analysis.

The Fibermetric application can be used on fibers ranging from 40 μm to 100 nm. It therefore can be used for a wide range of applications, like investigation of filtration materials, diaper paddings, fiber research, and fiber and filter production control.

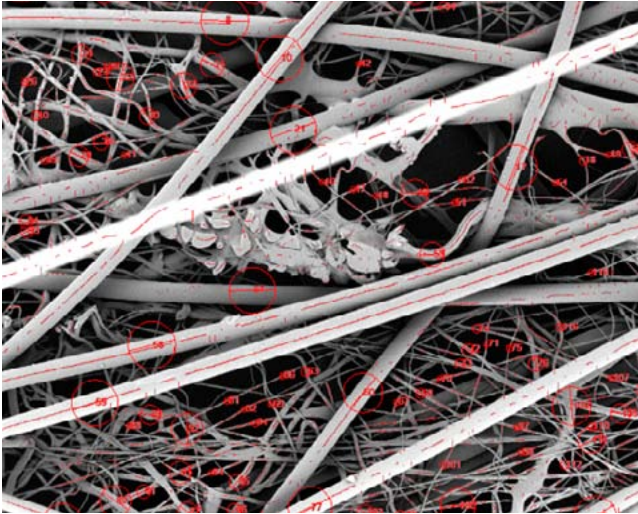
The Fibermetric application generates all the statistical data you need, without an elaborate laboratory infrastructure or specially trained operators.



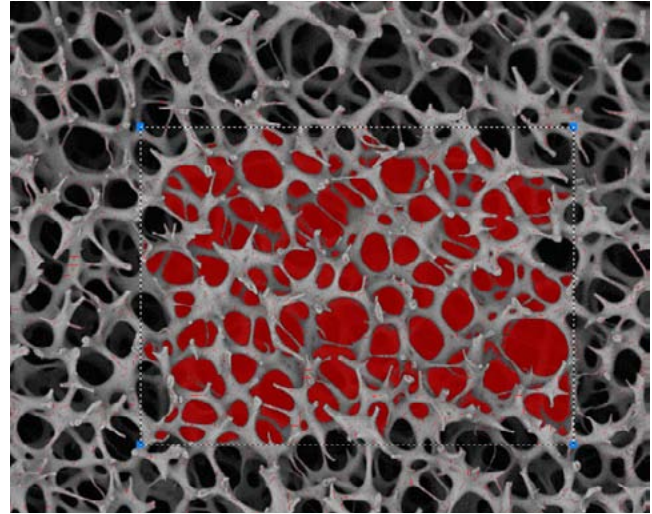
Fibermetric user interface with fiber and pore measurements.

Benefits of the Fibermetric application:

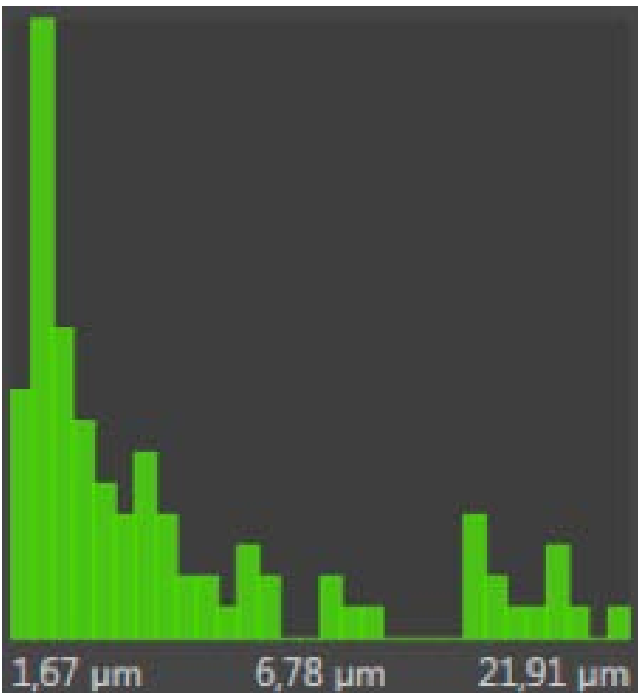
- Save time by automated measurement
- Fast and automated collection of all statistical data
- Large range of fibers and pores to be measured
- Export all collected data, either statistically or as a raw data-file
- View and measure micro and nano fibers with unmatched accuracy
- Operator-independent measurements
- Real-time Phenom G2 pro operation



Spun bond and melt blown fiber sample analyzed with the Fibermetric.



Automated pore measurements on a polymer membrane sample. A pre-defined area of pore measurements has been highlighted.



Measurement results are represented in the histogram. The user can define the number of bins in the histogram. The min/max and average fiber size are displayed below the histogram.

Specifications

- Fiber Detection:
 - 40 μm to 100 nm
 - 1 to 1000 measurements per image
- Output:
 - XML-data file (incl. diameter measurements and pore surface areas)
 - jpg or tiff image format
 - Max. 1024 x 1024 pixel image
 - Customized fiber and pore distribution histogram
 - Minimum, maximum and average fiber size
 - Standard deviation
 - Fiber orientation
- Part of the Pro Suite:
 - Network storage enabled
 - Phenom integrated system