FiberMetric

Better, faster fiber analysis

Automated measurement
Save time by automated measurement

Automated collection
Fast and automated collection of all statistical data

Large range
Large range of fibers and pores to be measured

Unmatched accuracy
View and measure micro and nano fibers with unmatched accuracy

Operator-independant measurements
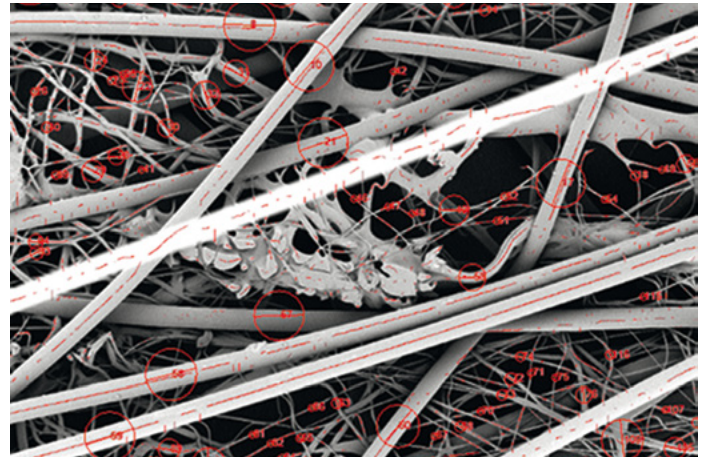Revealing the distribution of elements within the sample

Real-time
Real-time Phenom SEM operation

Distributore esclusivo per l'Italia:

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PHENOMWORLD

FiberMetric user interface with fiber and pore measurements

Spun bond and melt blown fiber sample analyzed with the FiberMetric

Direct observation and measurement of micro and nano fibers is faster, better and easier than ever before with the Phenom desktop scanning electron microscope (SEM) and FiberMetric software.

Phenom desktop SEM

In combination with the Phenom desktop SEM, the FiberMetric software allows the user to produce accurate size information from micro and nano fiber samples. It is possible to measure and analyse complicated fiber structures, ranging from spun bond 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 consistend data). The automated feature and fiber size detection makes FiberMetric highly user friendly. With 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.

FiberMetric 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.
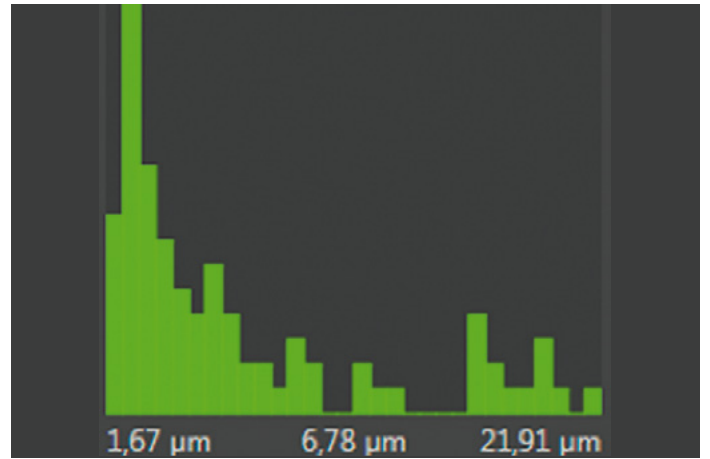
FiberMetric generates all the statistical data the operator needs, without an elaborate laboratory infrastructure or specially trained operators.
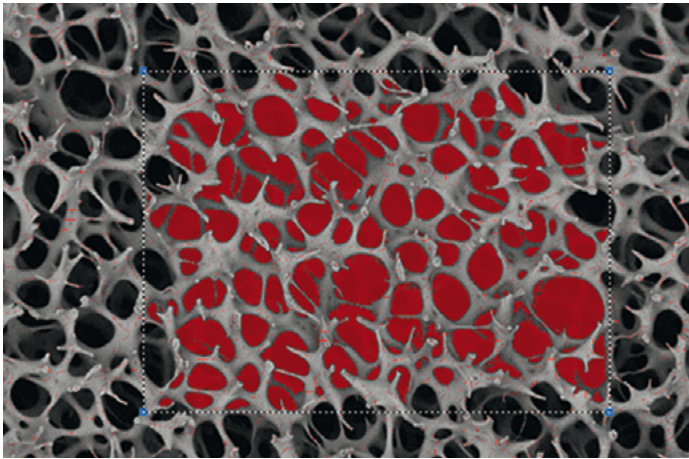
Automated pore measurements on a polymer membrane sample.
A pre-defined area of pore measurements has been highlighted

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

Benefits

• 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 desktop operation

Imaging 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, TIFF
	· Max. 1024 x 1024 pixel image
	· Customized fiber and pore distribution histogram
	· Minimum, maximum and average fiber size
	· Standard deviation
	· Fiber orientation
Part of ProSuite	· Network storage enabled
	· Phenom integrated system

ParticleMetric

The Phenom desktop SEM with ParticleMetric software allows easy generation and analysis of SEM images. The integrated ParticleMetric software allows the user to gather morphology and particle size data for many submicron particle applications. The fully automated measurements of ParticleMetric allow a level of visual exploration beyond optical microscopy that can lead to new discoveries and innovations in powder design, development, and quality control.

PoroMetric

The Phenom desktop SEM with PoroMetric software allows easy generation and analysis of SEM images. The integrated PoroMetric software allows the user to gather data on distribution of pores, and pore parameters like pore size and aspect ratio.

PoroMetric allows the user to get a better understanding of the characteristics of the materials, as it extracts detailed information of the complete set of pores. PoroMetric is the best in its class when it comes to measurements of pores.

ParticleMetric Specifications

Particle analysis
- Particle size range · 100 nm – 0,1 mm
- Particle detection speed · Up to 1000 particles per minute
- Measured properties · Size, shape, count

Particle parameters · Area, circle equivalent diameter, surface area, circumscribed circle diameter, volume by area, circumference, aspect ratio, circularity, elongation, grayscale, major axis, minor axis, convex hull, gravity centre (x,y), pixel count, convexity.

Graphical display · Plot graphs in linear log or double log scale, by number or by volume
· Scatter plots of any given parameter
· SEM image of individual particle

Part of ProSuite · Network storage enabled
· Phenom integraded system

PoroMetric Specifications

Pore analysis
- Pore size range · 100 nm – 0,1 mm
- Pore detection speed · Up to 1000 pores per minute
- Measured properties · Size, shape, count

Pore parameters · Area, circle equivalent diameter, aspect ratio, major axis, minor axis and manual measurement

Graphical display · Plot graphs of the circle equivalent diameter
· SEM images and detected pores

Part of ProSuite · Network storage enabled
· Phenom integraded system

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