Phenom ParticleMetric Software

Powerful software for inspection of particles and powders

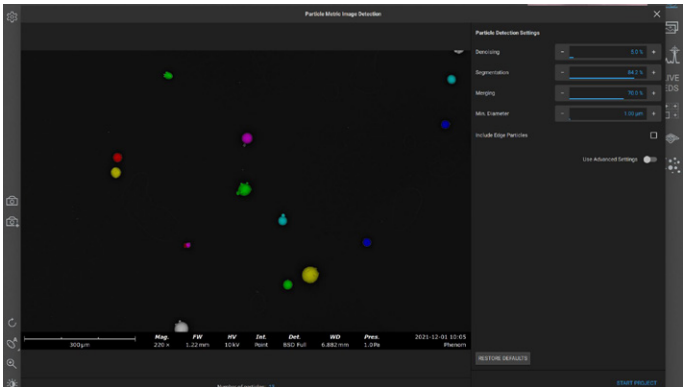
The visualization and analysis of particles is easier than ever before with a Thermo Scientific™ Phenom™ desktop scanning electron microscope (SEM) and Thermo Scientific Phenom ParticleMetric Software. The combination of the ease of use and superb imaging of Phenom desktop SEMs with the particle analysis capabilities of Phenom ParticleMetric Software yields a powerful tool for the inspection of a wide range of particle and powder samples.

Phenom ParticleMetric Software

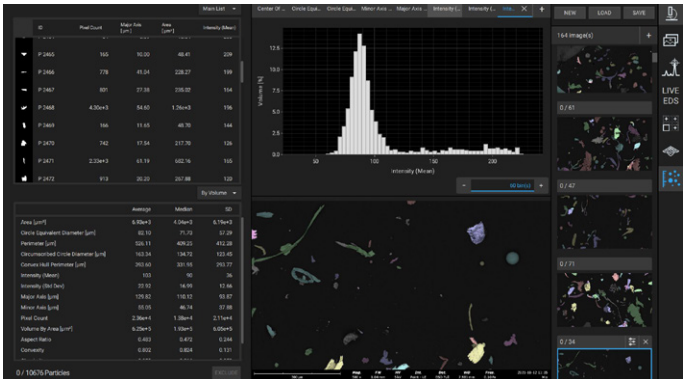
A Phenom desktop SEM with integrated Phenom ParticleMetric Software provides a workflow for the acquisition and subsequent analysis of SEM images. Phenom ParticleMetric Software allows you to gather data on the physical properties of particles for many sub-micrometer particle applications.

The integration with the microscope interface allows a level of visual exploration beyond optical microscopy that can lead to new discoveries and innovations in powder development.

Data is visualized as histograms or scatter plots, and particle statistics can be viewed at a glance. Histograms of any measured particle property can be generated by numerical value and volume. The histograms and scatter plots and generated images can be exported in the selected format to be used as a reporting tool.



Overview of processed images.



Data can be visualized using graphs and histograms.

ParticleMetric Software specifications	
Particle analysis	
Particle size range	100 nm–0.1 mm
Particle detection	8- and 16-bit image processing
Speed	More than 1,000 particles per minute
Measured properties	Size, shape, count

Particle parameters

Area, circle equivalent diameter, perimeter, circumscribed circle diameter, convex hull perimeter, particle intensity, major axis, minor axis, pixel count, volume by area, aspect ratio, convexity, circularity, elongation

Interactive data visualization

- Plot graphs by number or by volume
- Scatter plots of any given parameter
- SEM image of individual particle

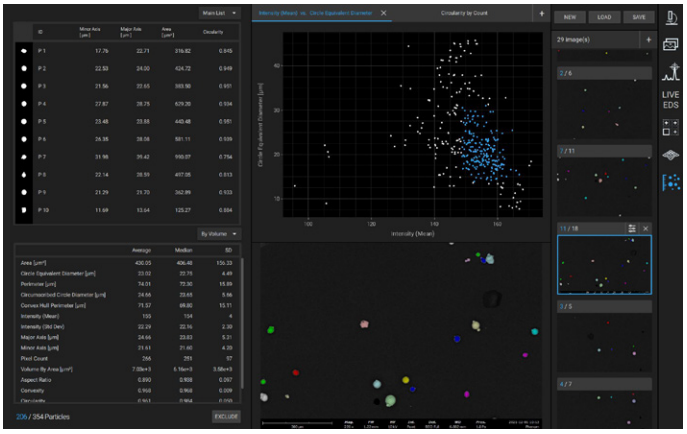
Output

Report in ODT format, TIFF image format, CSV file, Project file (.Phen) for offline analysis

Data storage

- Network storage enabled
- Phenom integrated system

Scatter plots can be generated using any combination of particle properties to reveal correlations and trends. Upon saving the data, a report is generated automatically. The report includes all charts that were generated during the analysis, along with the particle statistics. Phenom ParticleMetric Software allows you to obtain the data you need, when you need it. By analyzing more than 1,000 particles per minute, Phenom ParticleMetric Software accelerates particle analysis and improves product quality.



Scatter plot selection.

Main advantages of Phenom ParticleMetric Software

- Integrated in the Phenom SEM user interface
- Image acquisition directly from the Phenom desktop SEM
- Identification and confirmation of phenomena such as broken particles, agglomerates, and foreign particles
- Correlation of particle features such as diameter, circularity, aspect ratio and convexity
- Fast and convenient operation with improved workflow
- Image collection is limitless, as digital files are easily stored on a network or USB disk for data sharing, communication, or later reference
- Statistical data with high-quality images
- Automatic generation of reports in ODT format
- Ability to revisit detected particles

Introducing the powder in the Nebula Particle Disperser for creation of a uniform monolayer.

Nebula Particle Disperser

With the Thermo Scientific Nebula™ Particle Disperser, a standard method for uniform powder dispersion on SEM stubs becomes available. The Nebula Particle Dispenser ensures best sample preparation by depositing a mono layer of particles, avoiding particle clusters while maintaining the structure of fragile particles. This dry powder disperser is easy to use and allows you to obtain the best results in combination with Phenom ParticleMetric Software.

Nebula Particle Disperser specifications	
Powder size range	0.1–1,500 µm
Dispersion vacuum range	0–0.8 Bar
Pressure setting precision	0.05 Bar
Dimensions and weight	
Nebula / Nebula Particle Disperser	390(w) x 210(d) x 350(h) mm, 8.5 kg
Diaphragm vacuum pump	145(w) x 220(d) x 213(h) mm, 4.5 kg

Learn more at **thermofisher.com/phenom**

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