

# Phenom™ advantages in forensics

Phenom™ - closing the imaging gap between Optical and Electron Microscopy.

The Phenom™ is a desktop scanning electron microscope (SEM) which combines the high magnification of electron microscopy with the ease of use of optical microscopy to improve performance in a tabletop instrument.

The Phenom, a tabletop SEM provides useful magnifications up to 24,000x, is easy to use as the typical laboratory-grade optical microscopes. The Phenom cuts away the time, difficulty, and expense of the conventional SEM. The operator simply places the sample in the specially designed holder on the microscope. Due to its unique design there is no risk of damaging the lens. The automatically focused image is displayed in less than 30 seconds later, with the resolution and depth of focus typical belonging to SEMs.

The Phenom is a true walk-up tool so many forensic experts can investigate their own samples in first line, taking away the sample load of the conventional SEM. Some of the key features of the Phenom dedicated to forensics are listed.

## **Imaging power**

Up to 24,000x magnification with superior depth of focus and superb picture quality and a maximum images size of 2048x2048 pixels – the benefit is getting high resolution print detail for quality presentation of the evidence.

## **Easy to use**

Intuitive control system and interactive touch screen reduces operator training and increases the number of users – every forensic examiner can do its first line investigation of the evidence or screen the evidence brought from the crime scene quickly.

## **Fastest Time to Image**

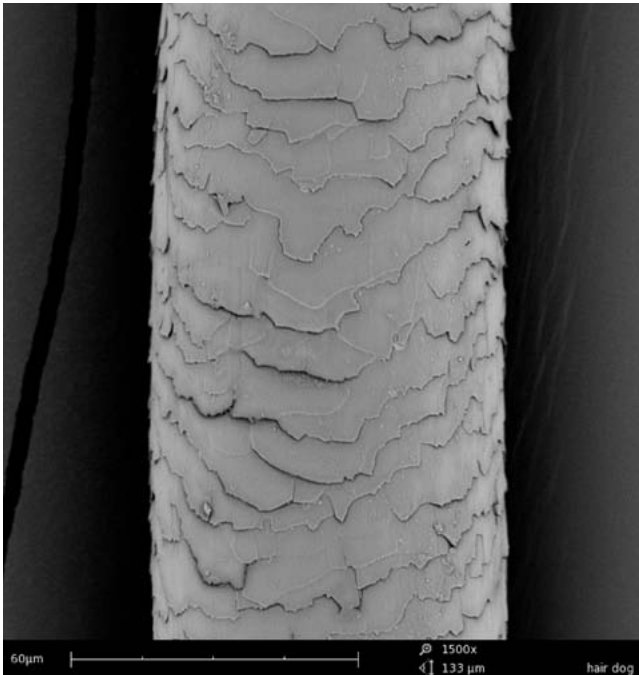
Through patented vacuum technology and never lost navigation – the color image of the video camera ensures the relationship between the sample and the image produced by the Phenom.

## **Low cost of ownership**

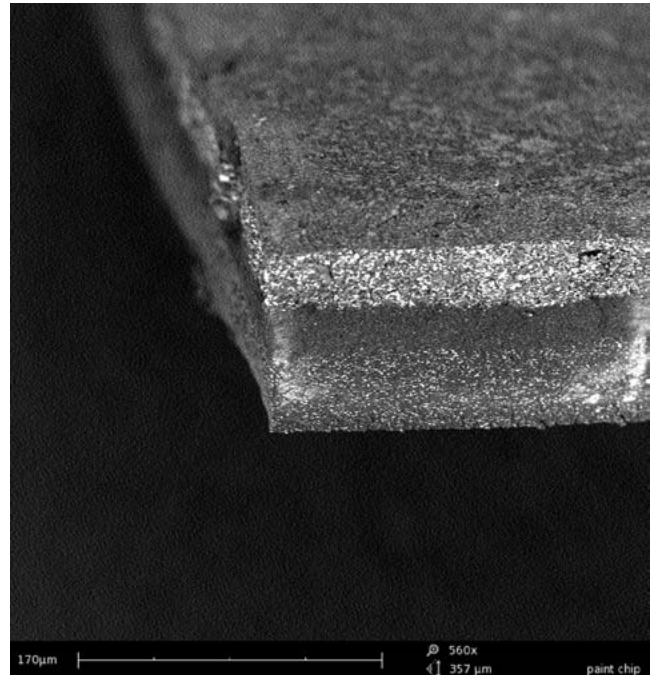
Easy to install and maintain and no special operator training needed – system is always available at any time any place.

Some examples showing the work areas of the Phenom in Forensics are shown on the next page.

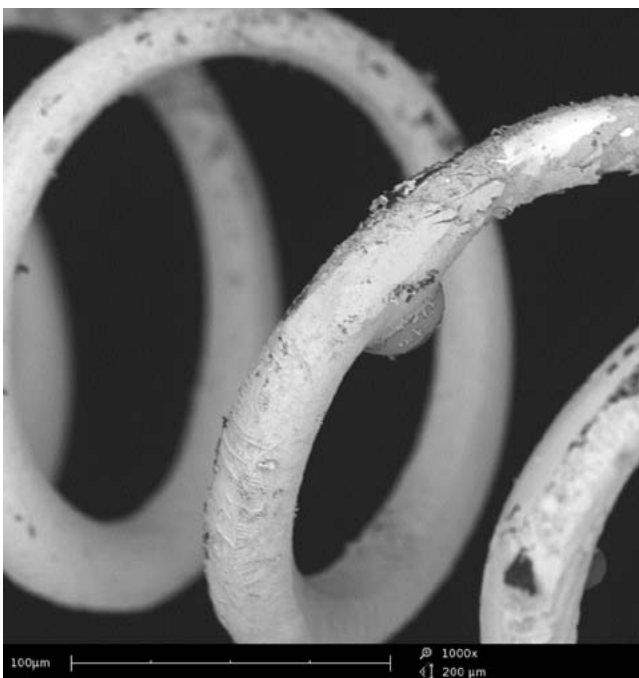




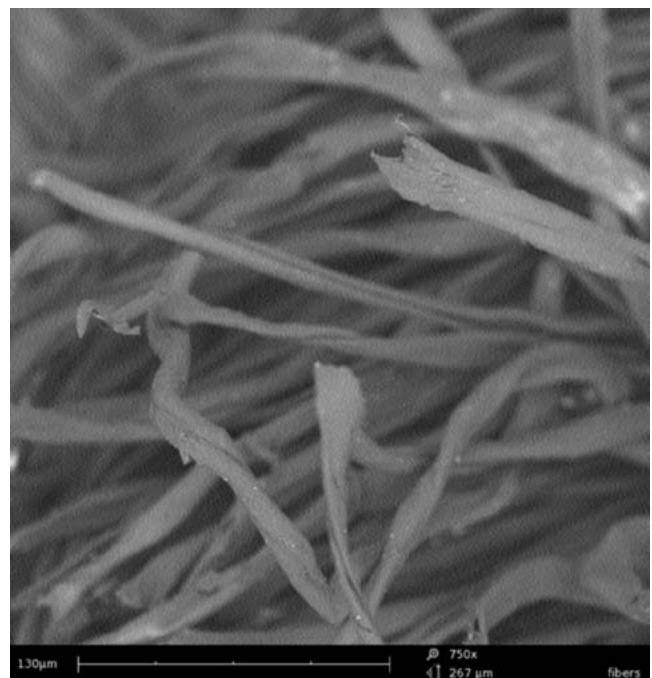
Detectives often find different hairs at a crime scene. Comparative hair analysis can contribute greatly to tracing and providing evidence in criminal cases. This image is from a dog hair which differs from human hair in texture.



After a hit and run accident, often small car paint flakes can be found at the crime scene. Car paint consists out of different layers of paint. Comparisons are made between flakes from a suspect vehicle and the specimen in order to find a match. The picture shows a paint flake revealing various paint layers.



When a car headlight or indicator is on, the lamp filament will be hot and at time of a crash, glass particles will melt onto the filament. The picture shows filament with a glass particle.



Cutting fibers by a knife will be different from cutting with a pair of scissors. Also gunshots will damage the fibers in a specific way. This image shows fibers cut by a knife.