

# High precision solutions for cleanliness analysis



## CLEMEX PSFILTER

Metallic and non-metallic particles analyzed in one step

Installed and ready to analyze

Clemex PSFilter turnkey systems come with custom installation, calibration and after-sales service so you can get started quicker.

Particles in hydraulic fluid & oils

Evaluate fluid cleanliness levels according to ISO 4406/4407 in hydraulic and lubrication systems.



## Understanding your challenges

### Characterizing cleanliness

With Clemex PSFilter you gain a complete understanding of the sample material by generating statistically significant data, by using image analysis, and contrary to Laser Particulate Counting (LPC), the analyses are completely reproducible.

### Conform to international standards

Clemex PSFilter allows to choose from pre-programmed international standards such as IESTSTD-CC1246D, ISO 16232, ISO 4406-4407, or USP 788. It also offers the option of customizing its properties so that in-house standards can be applied.

### View the entire sample

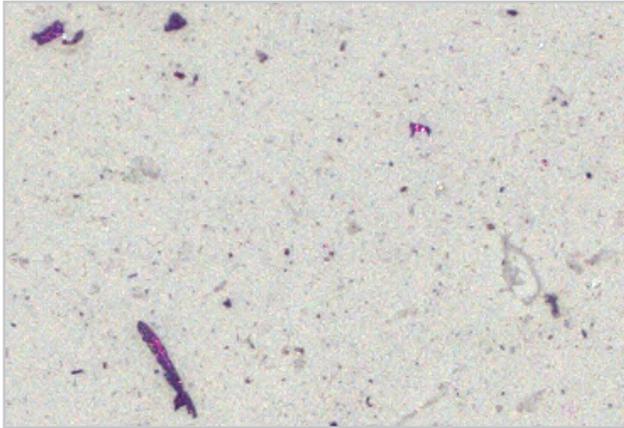
Clemex PSFilter accepts different types of samples: membrane filters, wafers, tape lifts and gel packs. Using specialized holders and an automated stage, the software-controlled microscope or macroscope can scan and map the sample in a few minutes.

### Need for details or speed

If speed is needed, using the Clemex PSFilter with a macroscope will yield results for particles of 5 microns and up. If fine details are important, using a microscope will render particles of 0.5 microns and up.

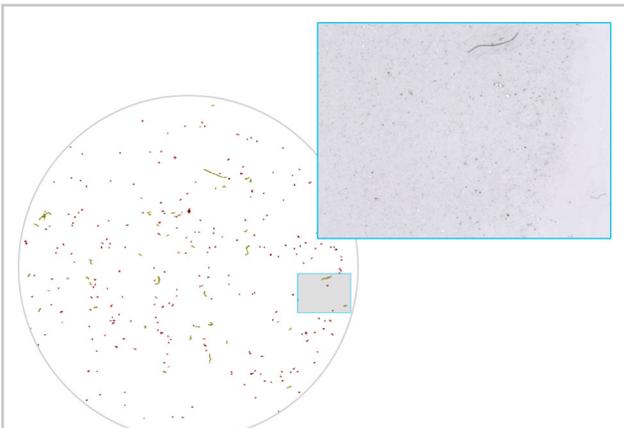
# High precision solutions for cleanliness analysis

The measuring of particle contamination is of the utmost importance in the manufacturing and pharmaceutical industries. Damage caused by these particles can often have detrimental effects in machinery and harmful effects in pharmaceuticals. That is why the Clemex PSFilter is specially designed to analyse contamination in different areas by measuring particles collected on membrane filters, wafers, tape lifts, or gel packs.



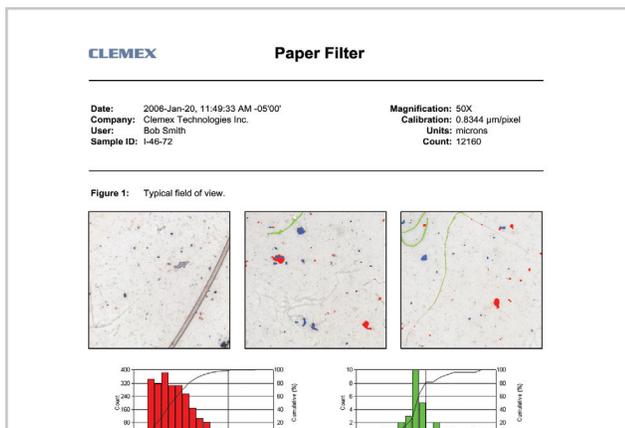
## A single data sheet for large and small particles

Some samples contain a great range of particle sizes. Clemex PSFilter scans these types of samples twice, first at high magnification then at low magnification, and combines the results from both analyses into one data sheet.



## All types of particles detected in one run

Clemex PSFilter automatically scans the sample and detects all particles of interest in a single step. As each field is analyzed, particles are measured and sorted based on their size, morphology or color. Data sheets are updated instantly.



## Fast and reproducible results

The instrument processes a large number of images, classifies the particulates and generates an easily reproducible report in just a few minutes. These accurate measurement results can then be used for documentation and presentation purposes.

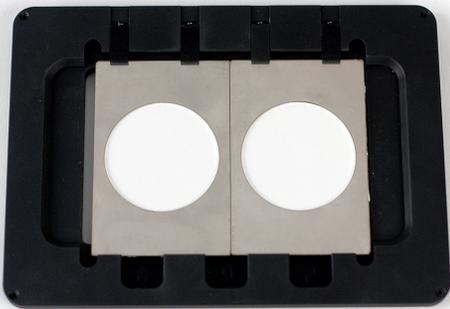
# Particulate analysis in 3 easy steps

Place the sample on the holder, choose a method, click start and in a matter of seconds the results are tabulated. Everything is repeatable and traceable. Need to modify a run? The Clemex PSFilter comes with a complete list of modifiable parameters, allowing you to customize a run.



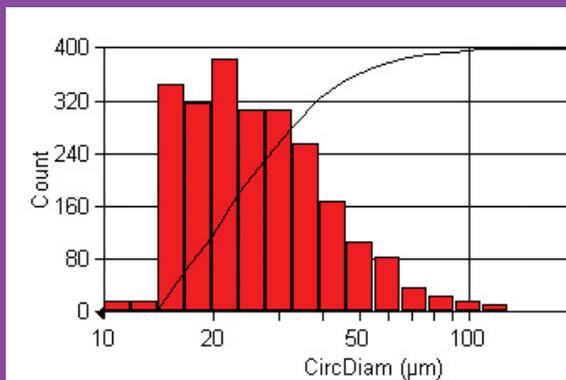
## Step 1

Select your standard



## Step 2

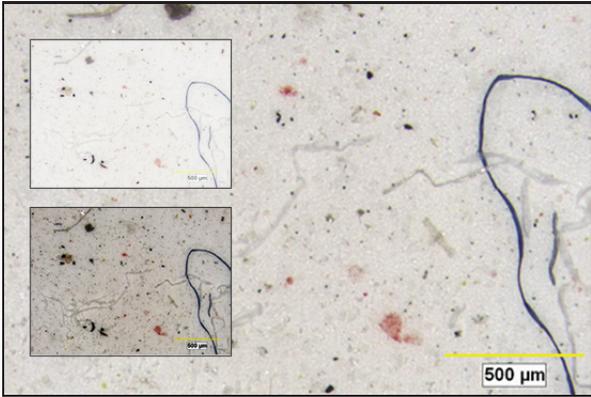
Scan your sample



## Step 3

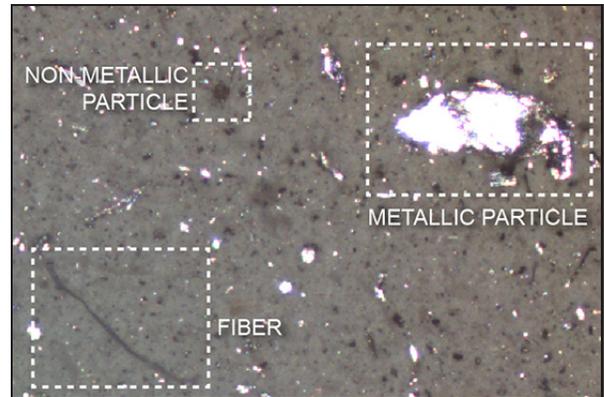
Export your results

# Product Features



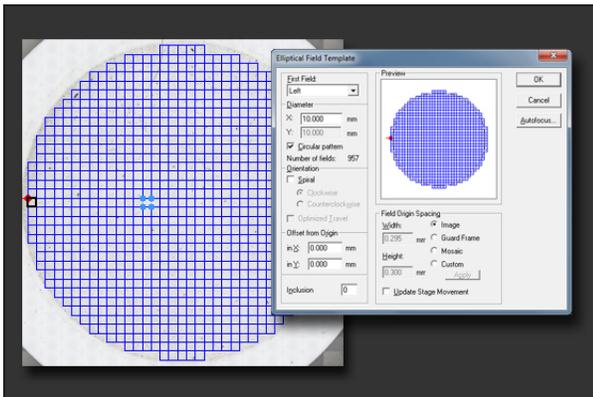
### Auto Exposure

Once you have set the initial target intensity, you can duplicate lighting conditions any time with a simple click of the Auto Exposure button. Adjusting camera shutter speed manually is not necessary.



### Characterize Metallic Objects

After detecting the objects of interest in your image you can use any number of custom or standard measurements to further classify objects. Produce and export raw and statistical data for metallic or non-metallic particles and fibers.



### Circular Stage Pattern

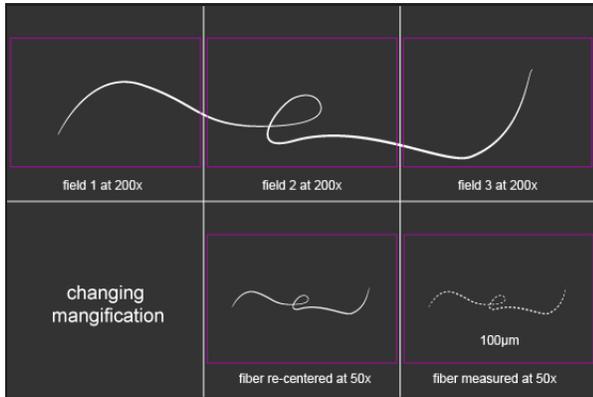
This feature helps you to easily create rounded stage patterns when analyzing membrane filters or wafers. You control variables such as size, shape, and the number of fields while the software does the rest.



### Individual reports for up to 6 samples

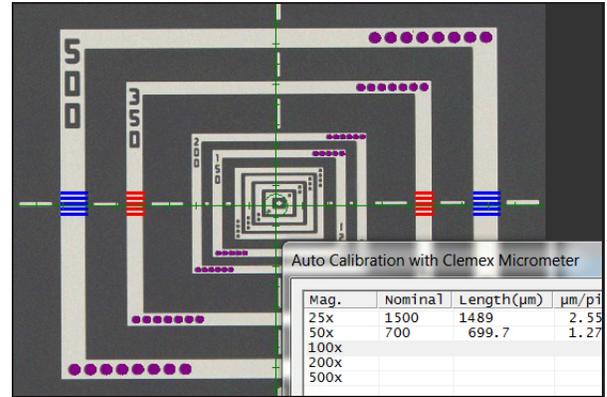
Measure particulates on six different samples without user intervention. Review the data after the scan is complete. Produce an individual report for each sample analyzed.

# Product Features



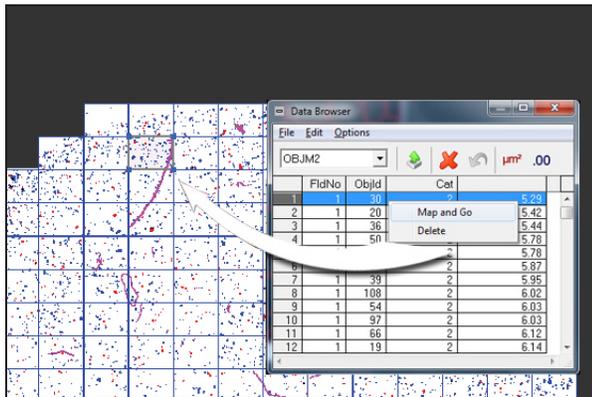
Conditional Tools - Long Objects

After a scan of the sample, objects that are longer than a field of view, such as fibers, are measured by automatically lowering the magnification and re-centering the objects. They can thus be viewed entirely for accurate measurement in one single data set.



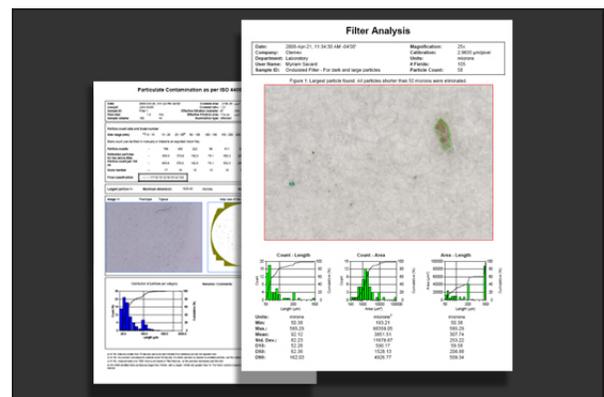
NIST-Traceable Auto Calibration

Using our NIST traceable micrometer, Clemex software automatically calibrates each lens, eliminating operator subjectivity. The system returns accurate, reproducible and traceable results.



Object Tracking

Primarily a built-in spreadsheet, Clemex PFilter's Data Browser also remembers the positions of all analyzed objects, even in multiple-field environments. This allows you to validate detected objects, delete artifacts, and sort the final results.



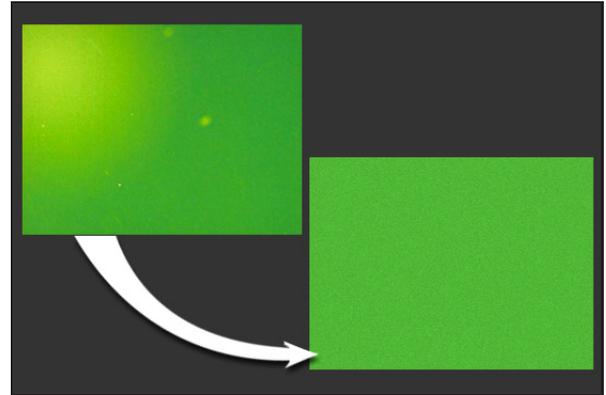
Professional-Looking Reports

Reports are generated automatically after each analysis and can be customized to suit your needs. You can add a company logo, images taken during analysis, graphs and charts, statistics and results.



### + Pre-calibrated for 10 $\mu\text{m}$ and up

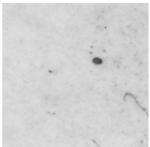
Clemex Production PSFilter. Hassle-free and fast. This fixed-magnification instrument arrives pre-calibrated and ready to analyze particulates 10  $\mu\text{m}$  and over in approximately 3 minutes for a 47mm filter.



### Automatic Shading Corrector

Our software's unique fully automated shading correction feature ensures even illumination for images captured using the system's camera. The image on the left was captured without a shading corrector. A pseudo-color LUT was applied to show the differences in gray levels.

## Related Web Reports



Cleanliness Inspection



Engine oil filter debris

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