

Reproducible particle size and shape image analysis



VERSION
8.0

CLEMEX PSA

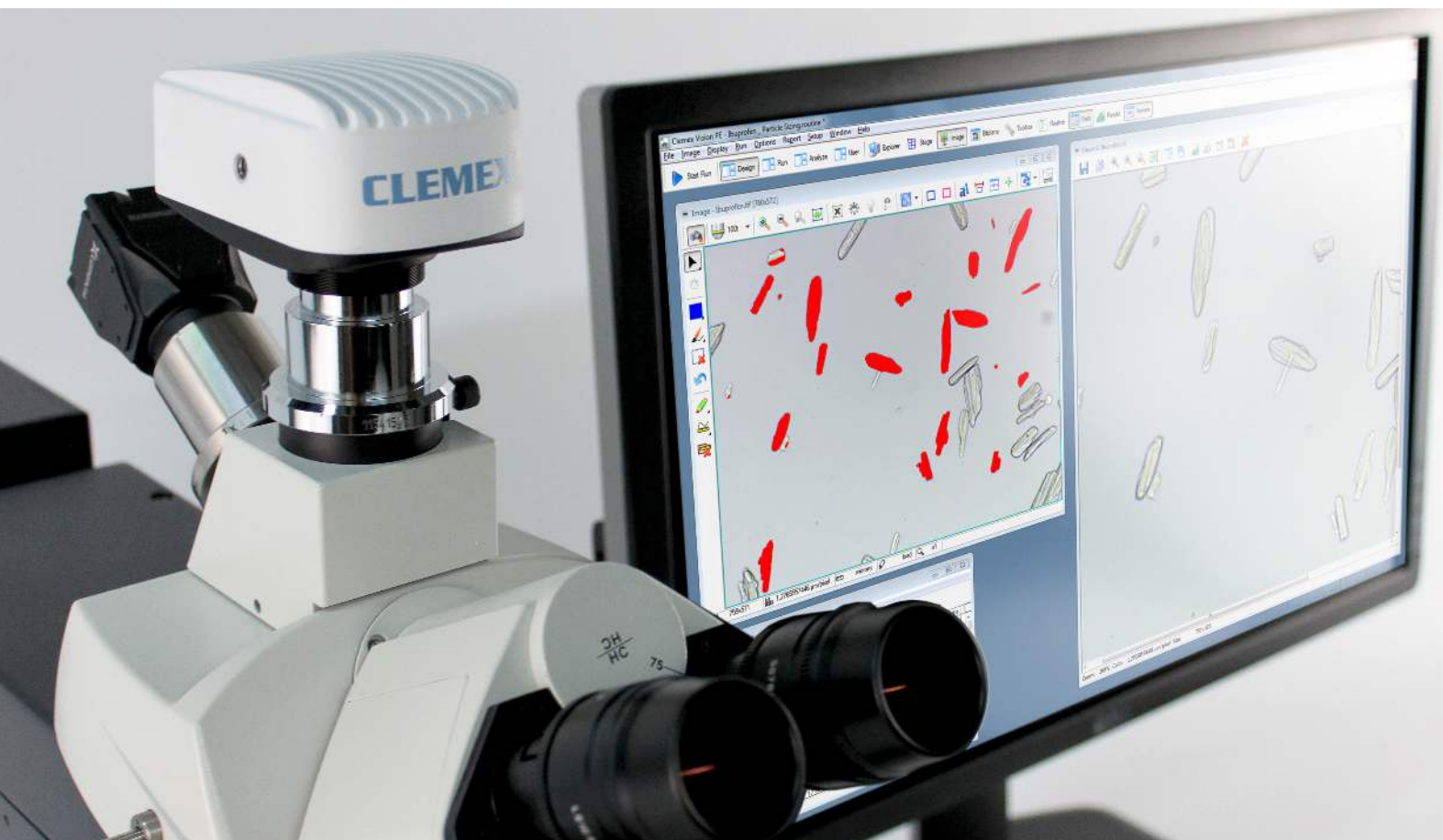
Version 8 of Clemex PSA is now available for purchase

Stay updated

As a subscriber to the ClemexCare service plan, you are entitled to all product updates released by Clemex.

Your input is appreciated

Thanks to our customers' comments, Clemex products have evolved to better suit the needs of end users across the world.



Understanding your challenges

More efficient lab production

The level of automation available with Clemex PSA will certainly help your lab reach maximum effectiveness. Generating statistical and individual data for tens of thousands of particles becomes reality, while manufacturing efficiency and product performance are easily attained.

Traceability requirements

The Clemex PSA system's user rights management conforms with regulatory requirements such as FDA 21 CFR part 11 ensuring data integrity.

Reproducible measurements

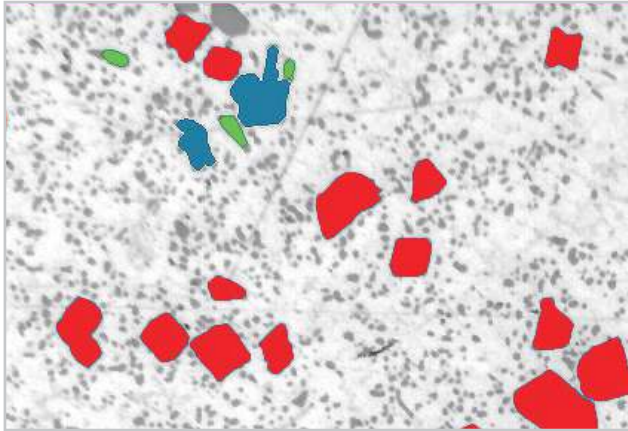
Optical microscopy is the best way to look at large samples of particles that lie in their most mechanically stable position and the only way to obtain real shape measurements.

Powder cluster dispersion

As a stand-alone unit beside the Clemex PSA, the Clemex Powder Disperser breaks agglomerates, without damaging the particles, so that they might be easily observed and differentiated by optical microscopy.

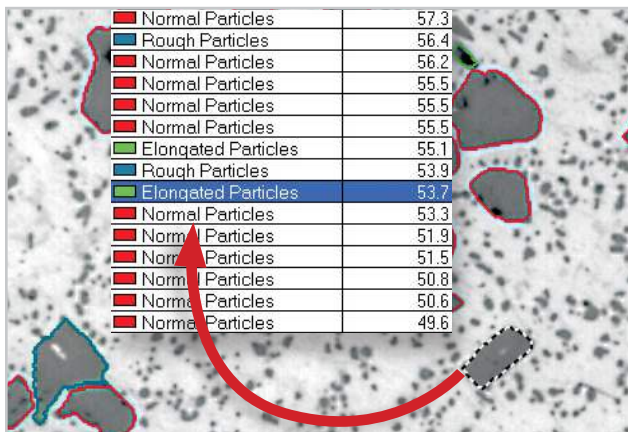
Reproducible particle size & shape image analysis

Addressing a need in the field of particle characterization, the Clemex PSA is a versatile particle size and shape image analysis tool that can be used in a wide range of applications - particularly in the pharmaceutical industry and in materials science for quality control. Clemex image analysis methods offer an essential advantage: obtaining real size and shape measurements with results that are accurate, reliable and reproducible. The same sample, the same results.



Isolate particles of interest

Clemex PSA isolates only the particles that matter. Objects can be categorized or eliminated by any desired shape, size, color, or texture attribute regardless of whether they are opaque, semi-transparent or transparent.



Data validation

Every single particle data is listed in the unique Clemex Data Browser and is linked instantly to the corresponding field of view along with the highlighted object. The Data Browser tool allows validation or elimination of data.



Separate crossed fibers

Clemex PSA separates crossing fibers as individual particles and assigns each one accurate size and shape parameters. The image analysis system is capable of proper characterization of fibers or elongated crystals, a very important control issue in the pharmaceutical industry.

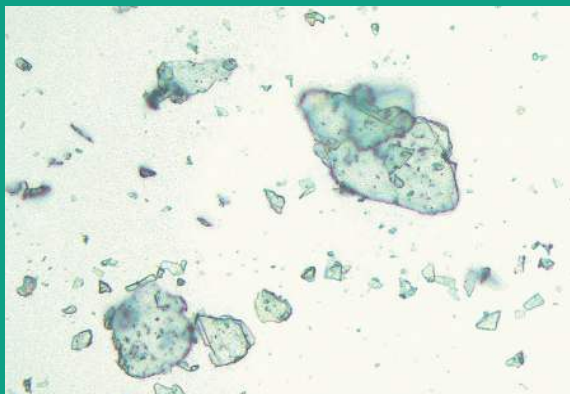
Particle analysis in 3 easy steps

Clemex PSA can scan large or small areas on any number of samples according to pre-defined patterns. Users always maintain complete control of the microscope and the stage.



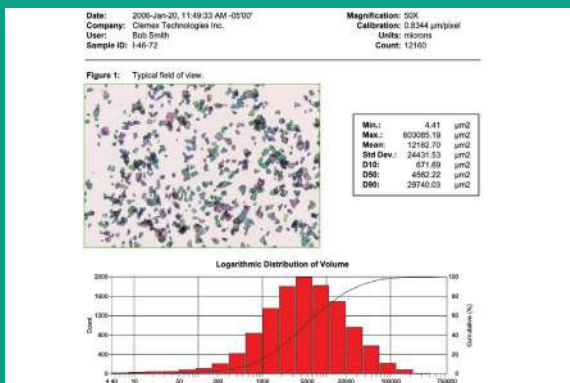
Step 1 - Your sample

Samples are placed in holders. Any number of pattern formats can be pre-defined for any number of slides. All system parameters, such as automated magnification, light intensity, x/y/z stage movements, and calibration, are software controlled.



Step 2 - Choose attributes

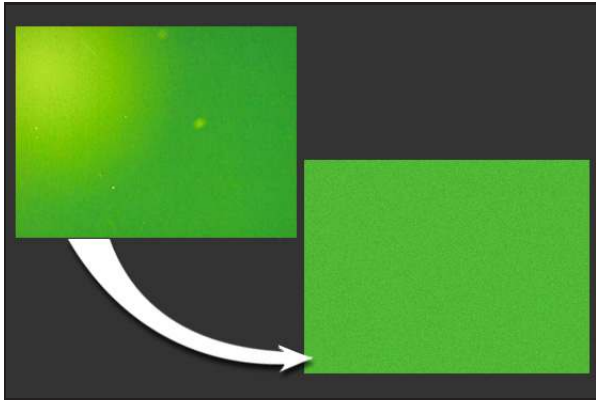
Clemex PSA offers an incredible range of properties and customizable parameters that can be used to isolate only the particles that matter. Objects can be categorized or eliminated by any desired shape, size, color, or texture attribute.



Step 3 - Results

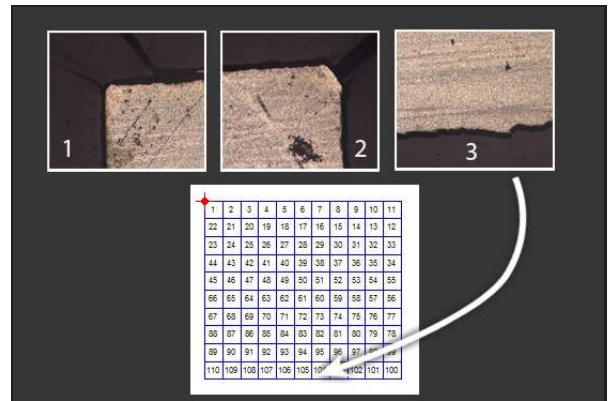
Reports can be tailored to user specifications, to produce either a secure printable report for distribution and review, or to save to a spreadsheet program for further analysis and calculation.

Product Features



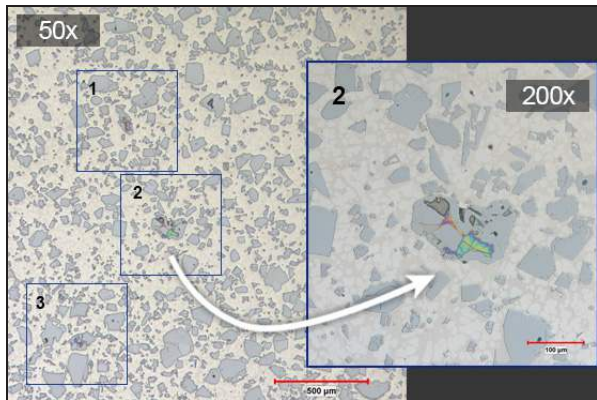
Automatic Shading Corrector

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.



Define Region

The system defines a region to analyze based on three coordinates set by the user. A stage pattern (circular / rectangular) is automatically created to encompass the whole region. An automatic plane is created, meaning all points within the region to be analyzed will be in focus.



Smart Patterns for More Precision

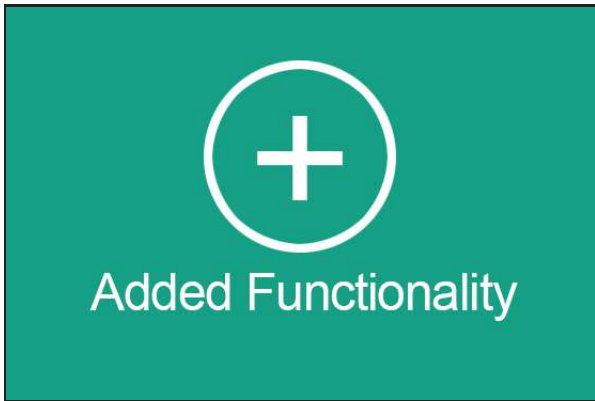
The system saves time by scanning the entire sample at low magnification to detect areas which need to be analyzed with greater precision in a second step. A custom stage pattern is automatically created to analyze the objects of interest at a higher magnification.



USB3 Compatible Cameras

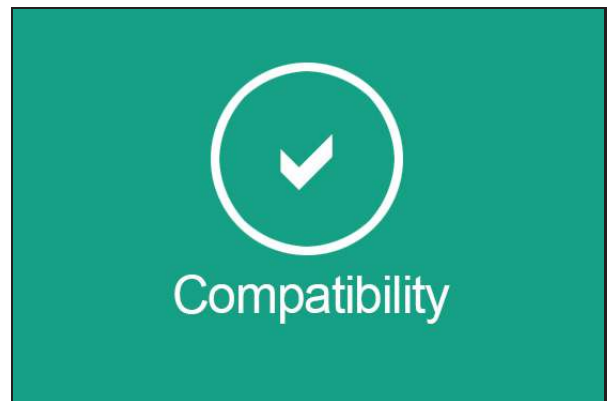
Reduce your analysis time with a new high resolution camera. These compact and robust cameras use the latest SuperSpeed USB3 technology for fastest image delivery. They provide excellent quality high-speed images with zero blur.

Product Features



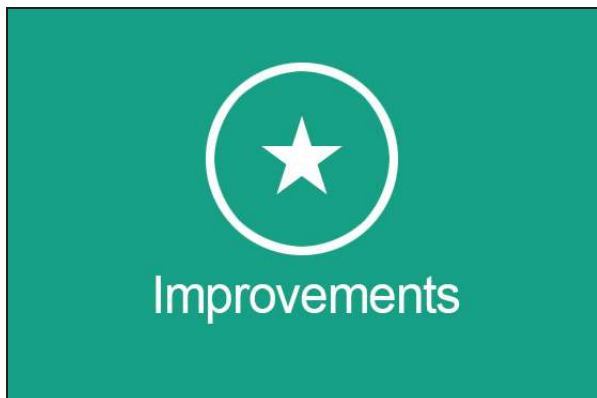
Added Functionality

Analyze up to six samples with the same routine and six individual reports • Send a group of objects to a different category in the Data Browser • Add a Comment Box instruction during gray or color thresholding



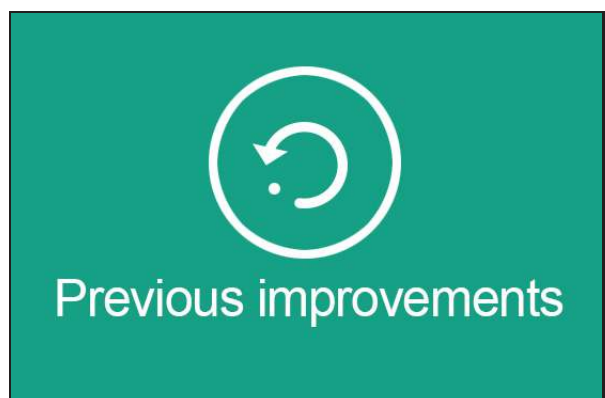
Compatibility

Windows 8 compatible • Reports generated with Excel 2012-2013 • New compatible motorized Nikon and Olympus microscopes • USB3 camera compatible



Improvements

Mosaic memory improvement (64 bits) • Manual mosaic made simple • Improved Auto Gray Threshold algorithm • Long name allowed for bitplanes • Reduced image size for lighter reports



Previous Improvements (v7.0)

Conditional Instructions • Added compression settings when saving JPEG images • Sort on multiple columns in the Data Browser • New Object and Field measures • Ability to move all stage patterns at once

A Commitment to Excellence in Imaging

Clemex are experts in complex and simple microscopic image analysis applications in:

Raw Materials

Powders

Metal Parts

Contaminants

Custom Applications

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