

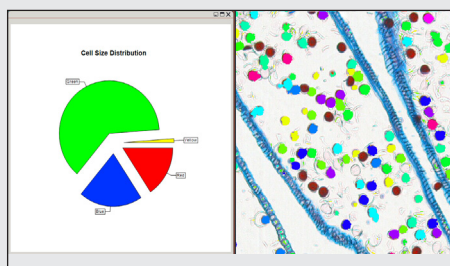
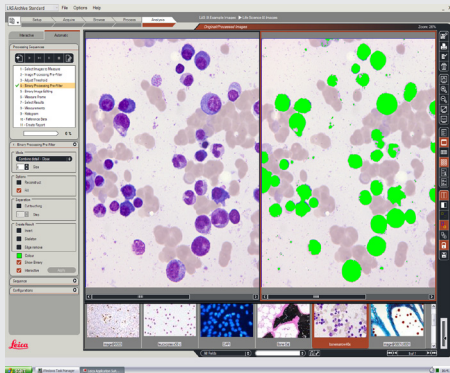
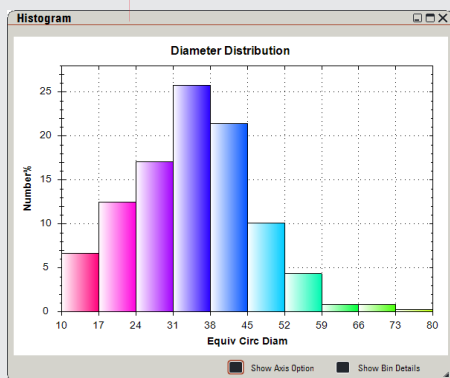
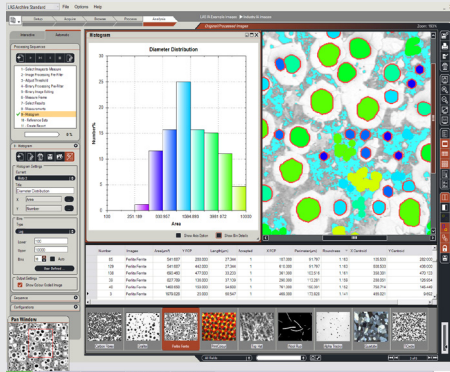
LAS Image Analysis

Automatic Analysis of Multiple Image Features

Living up to Life

Leica
MICROSYSTEMS

Meaningful Results



LAS Image Analysis is a sophisticated software module that automatically performs feature detection, measurement and the evaluation of multiple image features. In conjunction with the Leica digital camera and microscope control, LAS can be used in a diverse range of imaging fields. With its Sequence Panel, LAS Image Analysis guides you through the set up process to simplify the procedure of acquiring meaningful data and once established, these settings can be used repetitively for future analyses.

LAS provides you with all you need to acquire a high quality image of a specimen. Images can be acquired individually or by automatically scanning a specimen using the optional LAS MultiStep module. Images can then be processed by LAS Image Analysis to enhance the edges of features so that they are accurately measured. By simply using the thresholding functions, you can specify the minimum and maximum gray scale values or the hue saturation and intensity levels of a colour image to identify the required image detail, prior to measurement.

If some minor debris is still visible after thresholding, then binary processing may be employed to improve the image. A selection of binary processing operations are provided and these can be tested interactively to ensure that the image is optimised appropriately. Once you have selected a method that is suitable, the conditions can be stored for use with further images. LAS Image Analysis also provides manual 'image editing' for the occasions when a more hands on approach is preferable. This allows you to indicate regions suitable for analysis or to identify the features to be measured and remain in complete control of the specimen.

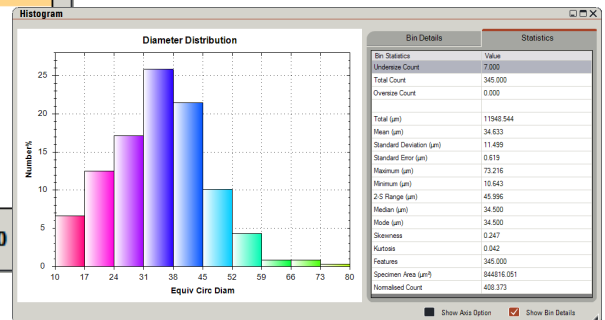
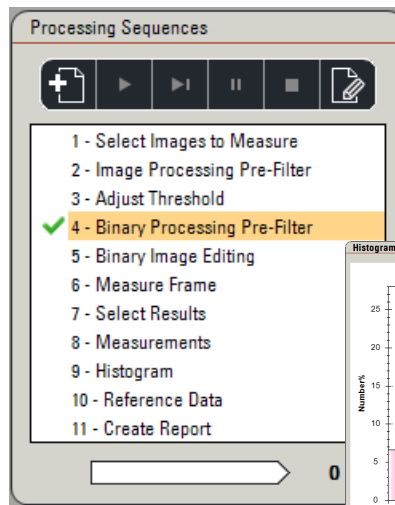
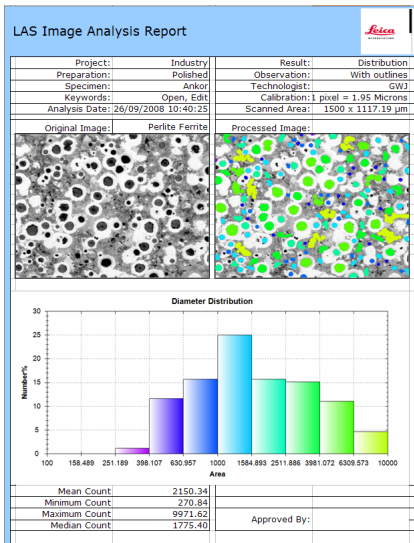
Effortless Feature Measurements

Once the binary image has been produced, the features in this image can be measured to give a variety of morphological information such as size, shape and position. The large number of parameters available gives you the option of selecting the information that is most appropriate to your sample to give you a meaningful characterisation of your specimen.

When the measurement has been completed, the resulting data is stored for review, summary, and interpretation. Raw data can be examined and statistics calculated in order that trends can be identified, whilst histograms and pie charts can be plotted to further organise the specimen information. Result data can then be outputted to a Microsoft Excel template so that customised reports can be created and further calculations derived.

Key benefits:

- An easy to use sequence control that guides you through the whole set up process for acquisition, detection and measurement.
- Save and recall settings and configurations to exactly recreate the same conditions at a later date
- Sophisticated measurements on individual features including size, shape, position, orientation and intensity
- Create meaningful results with a range of analysis tools including statistics, histograms and pie charts



Statistics	Area(µm²)	Y FCP	Accepted	Length(µm)	X FCP	Perimeter(µm)	Roundness	X Centroid	Y Centroid	Equiv Circ Diam(µm)
Total	361207.205	159381.000	352	15059.234	180464.000	43958.645	448.593	179457.714	154057.735	12005.448
Mean	1026.157	452.787	1	42.782	512.682	124.883	1.274	509.823	437.664	34.106
Standard Deviation	675.152	200.418	0	16.386	268.973	47.712	0.214	269.158	201.015	11.971
Standard Error	35.986	10.682	0	0.873	14.336	2.543	0.011	14.346	10.714	0.638
Maximum	4210.174	766.000	1	97.104	972.000	312.369	3.608	970.331	759.479	73.216
Minimum	39.693	100.000	1	9.359	51.000	28.078	1.053	36.718	78.839	7.109
2-S Range	2700.608	801.671	0	65.545	1075.890	190.848	0.856	1076.630	804.060	47.883

“With the user, for the user”

Leica Microsystems

Leica Microsystems operates internationally in four divisions, where we rank with the market leaders.

• Life Science Division

The Leica Microsystems Life Science Division supports the imaging needs of the scientific community with advanced innovation and technical expertise for the visualization, measurement, and analysis of microstructures. Our strong focus on understanding scientific applications puts Leica Microsystems' customers at the leading edge of science.

• Industry Division

The Leica Microsystems Industry Division's focus is to support customers' pursuit of the highest quality end result. Leica Microsystems provide the best and most innovative imaging systems to see, measure, and analyze the microstructures in routine and research industrial applications, materials science, quality control, forensic science investigation, and educational applications.

• Biosystems Division

The Leica Microsystems Biosystems Division brings histopathology labs and researchers the highest-quality, most comprehensive product range. From patient to pathologist, the range includes the ideal product for each histology step and high-productivity workflow solutions for the entire lab. With complete histology systems featuring innovative automation and Novocastra™ reagents, Leica Microsystems creates better patient care through rapid turnaround, diagnostic confidence, and close customer collaboration.

• Surgical Division

The Leica Microsystems Surgical Division's focus is to partner with and support surgeons and their care of patients with the highest-quality, most innovative surgical microscope technology today and into the future.

The statement by Ernst Leitz in 1907, “with the user, for the user,” describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: **Living up to Life.**

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