



## ALPAGA and CALLISTO

*Another vision of sieving*

**OCCHIO develops your solution with ALPAGA, its revolutionary system for size and shape analysis of particles, and CALLISTO, its exclusive software for data acquisition.**

### ALPAGA

#### At Line Particle Acquisition for Granulo-morphometric Analysis



Do you want to improve the *productivity, flexibility and profitability* of your Control Process ?

ALPAGA is an optical granulo-morphometer which achieves optimal dispersion, illumination and imaging of individual particles. It provides you with the *most flexible and advanced technology* to characterize any kind of powders or granular materials, even transparent or friable ones, ranging from 1 micrometer up to several centimeters. Combined with the powerful CALLISTO image analysis software, ALPAGA is a *real time* optical sieving system, a kind of automated microscope, delivering unprecedented accuracy in granulometry and morphometry of particles.

Giving you results within barely *one minute*, ALPAGA offers you a faster and easier control of samples to guarantee the quality of your product to your customers. Originally designed to work at-line, it can now also be installed

**on-site** and programmed to automatically take a sample after a given time. Imagine... an automated, extremely accurate and reliable quality control, straight on your production line : OCCHIO makes it reality.

You do not want to change your standards? No problem, thanks to the exact measurement of the sieving diameter of the particles, our system is the only one on the market to be *perfectly correlated* with the sieves!

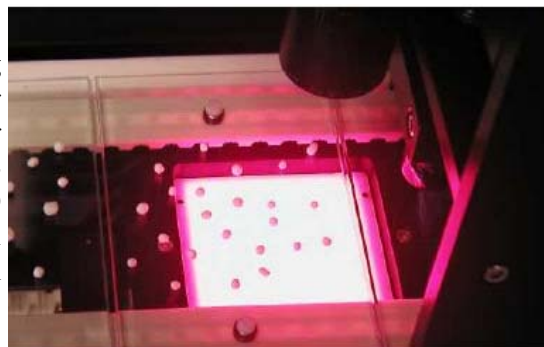
#### Fast, automated and accurate sieve size distributions for any kind of material, including yours!

Sands, glass (ground and balls), gravels, fertilizers, seeds, beads, ceramics, cosmetics, abrasives (including diamonds, Perlite,...), foodstuffs (milk, coffee, cocoa, spices, sugar,...), minerals, chemical powders, metal powders, plastic pellets (opaque and transparent), pharmaceutical powders, pills and pellets, explosives, catalysts,...

The following companies have already trusted ALPAGA : Umicore, FIB Services, Raffinerie Tirlemontoise, Tes-senderlo Chemie, Custodiam, ESK-SIC, Dow Chemical, Höganäs, EOS GmbH,...

#### How does it work?

Put a sample of your product into the funnel, coupled to a vibrating feeder. This one delivers your product onto a glass-slides conveyor belt. Adjust vibrating frequency and rotation speed of the conveyor belt to achieve optimal dispersion of the particles (patented system). Thanks to back-light illumination, to the high resolution CCD camera and to the accurate position of the glass-slide into the depth of focus of the imaging device, crisp clear images are generated in real time...ready to be interpreted by CALLISTO!





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### CALLISTO



CALLISTO is “the ALPAGA’s brain”. It serves four main functions.

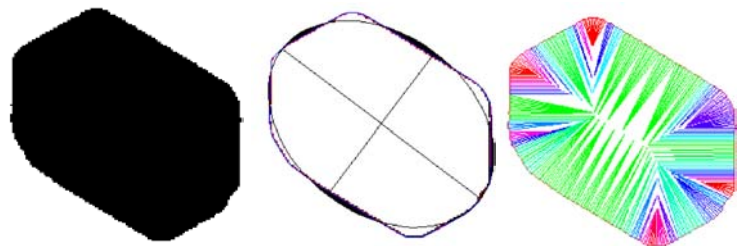
#### Keep an eye on your product

During the analysis, CALLISTO offers permanent visualization of the flow of particles passing in front of the camera. A real time zooming tool helps you to adjust the analysis parameters. At any time during the analysis, a simple click of the mouse allows you to save a picture of your product.

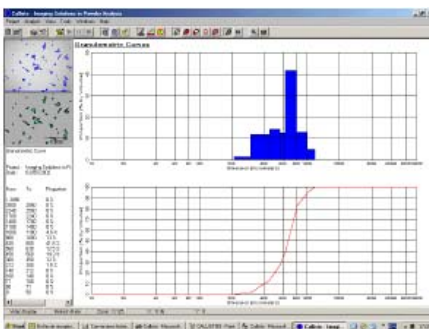


#### Customized image analysis with CALLISTO... and everything becomes possible

CALLISTO is based on the detection of each individual particle, of which characteristics are stored in an identity card. With these data, the software computes in real time the sieving diameters, elongation ratios, concavity and roundness indexes. Even better, OCCHIO develops on demand additional parameters to fit your needs, e.g. crystallinity, reactivity, angularity of abrasives, detection of satellites, detection of holes or broken pellets,...



#### Real time display of size and shape distributions



Thanks to its real time computation, CALLISTO permanently updates the analytical results. Size and shape distribution curves are displayed on basis of settings provided, or previously saved, by the user. These settings do specify the magnification ratio in use, the desired weighting method (by number or by volume) and the class boundaries (e.g. ASTM, ISO or BS sieve series). All data as well as individual particle outlines are archived in background task for further investigation with the software CALLISTAT.

#### Easy traceability guarantees quality

**There is just no alternative to CALLISTO’s performances in accurate sizing and morphometry of particles.**

All data are considered on a project based approach ; settings (sieve selection, batch identification,...) are saved and can be retrieved at any time to continue the analysis. Incoming particles measurements can either be added to an existing file or sent to a new one. The results of analysis are thus kept in files with reference to a given batch or analytical conditions. CALLISTAT will offer you the opportunity to extract two analysis reports and to establish comparisons between them.