



# AIM™ LPA

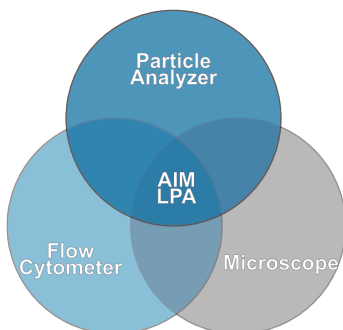
## Automated Imaging Microscope, Liquid Particle Analyzer

### What is AIM™ LPA?

The Automated Imaging Microscope (AIM™) is an advanced Liquid Particle Analyzer (LPA) that allows users to identify and measure microscopic particles in liquid samples from 1.5 to 200 microns ( $\mu\text{m}$ ) automatically in 4 minutes (or less).

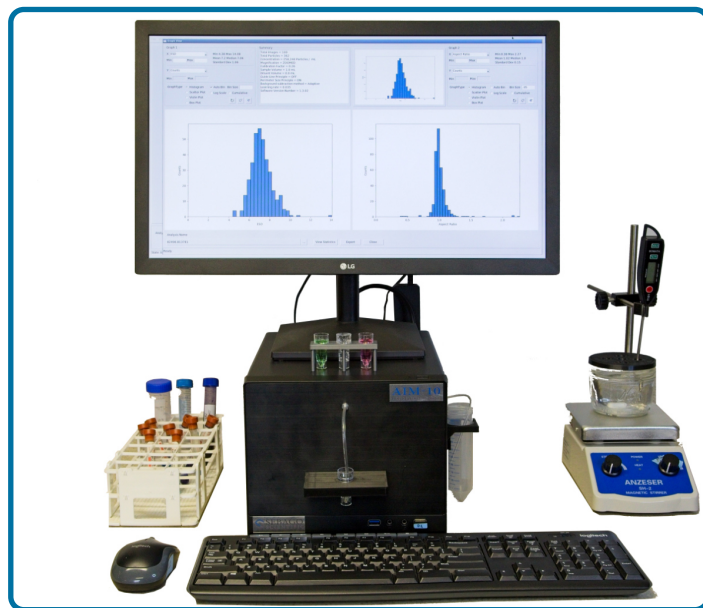
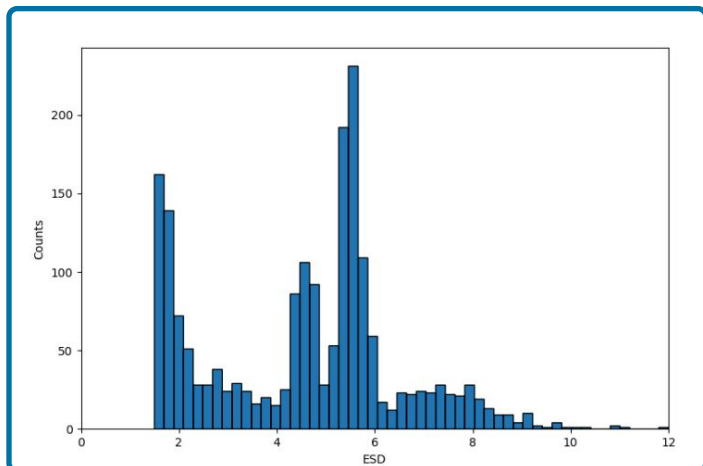
In simple terms, AIM is a flow imaging microscope (FIM) for automated microscopy. In traditional automated microscope imaging, the sample is placed on a microscope slide and the slide is moved to different positions for imaging. The AIM flows the sample through an imaging area in a continuous fashion, stopping the flow to take a unique image of the sample.

AIM combines the best features of a particle analyzer, a microscope and a flow cytometer, as shown on the right.

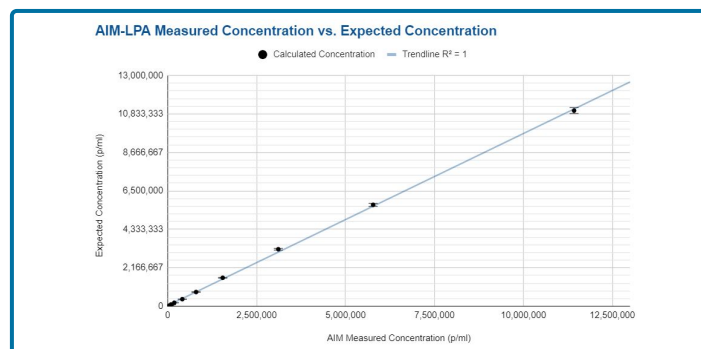


### Unparalleled Precision, Accuracy and Repeatability

In the example shown below, a sample was analyzed consisting of several similar-sized particles., 2.0 $\mu\text{m}$ , 5.0 $\mu\text{m}$  and 5.5 $\mu\text{m}$ . You can clearly see all three size peaks, but note that you can also differentiate the 5.0 $\mu\text{m}$  and 5.5 $\mu\text{m}$  particles, even though they only differ by 0.5 $\mu\text{m}$  in size.



The example below shows measurement linearity over a concentration range from 11,000 p/ml to 11,000,000 p/ml with measured 1.5% error:



### AIM Features:

- Continuous flow
- Simple, procedural-driven operation
- Automated calibration and cleaning
- Particle **size and shape** measurements
- Automated particle characterization based on size/shape information
- “Test Plan” creation for generation of SOPs
- Compact, self-contained footprint (computer included inside unit)



## How AIM™ Works

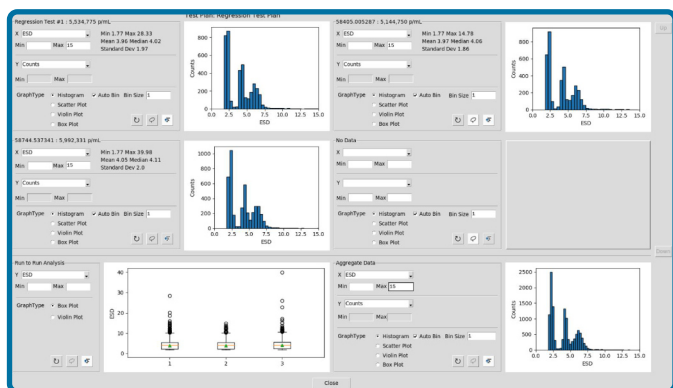
The diagram at right shows an overview of the AIM system. Sample is pipetted into a disposable sample cup; between 500µl and 3ml of sample is required, depending on sample characteristics. The internal pump pulls the sample through a narrow flow cell. At designated intervals the flow is stopped and imaged through the microscope optics.

The acquired images are then stored and processed by the embedded computer, producing reports such as particle size distributions and tabular results of the statistics, as determined by the particular test plan/SOP.

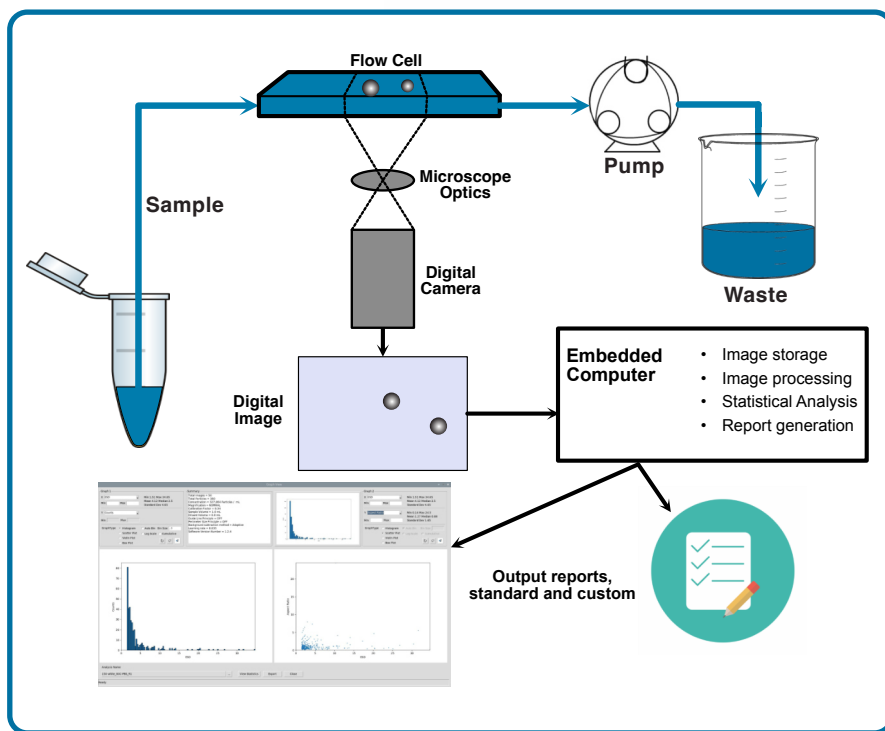
## Test Plans for Standard Procedures

Although the AIM LPA can be used in general lab conditions, one of its unique features is the ability of the operator to use a Test Plan in order to follow step-by-step instructions via the instrument interface. Predefined Test Plans are available from Sebago Scientific, and they can also be built and implemented either by the user organization/operator or by Sebago Scientific.

Test Plans enable for the user to be given step-by-step instructions (SOP) for how to perform a particular measurement. This means that every individual operator will be able to repeat a standard SOP, eliminating inter and intra-operator variance, and producing standardized reports:



The consistency of the Test Plan system, as well as the speed at which the results are produced, makes the AIM-10™ System a powerful tool for both SOP execution and advanced interrogation of the particle data.



## Typical AIM LPA Applications

- Quantification of protein aggregation
- Food/Beverage QA/QC
- Yeast viability analysis (Test Plan available)
- General particle production QA/QC
- Process contamination analysis
- Process trend measurement

AIM LPA is a general purpose instrument that can be applied to any particle analysis challenge. We invite you to [contact us](#) to learn more about our technology, and to discuss your application in more detail. Let us help you solve your production QA/QC challenges, and save both time and money.

We also offer particle analysis services, and we will be glad to try out your samples with AIM to give you an understanding of what is possible.

## We are all about Quality

Sebago Scientific isn't just any instrumentation company; we're on a mission to bring high-end analysis and QC capabilities to every customer while preserving a close-knit business environment and partnering with those who share our values.