

OPTICAL LAB ANALYZER FOR COFFEE & GRAIN

PRODUCT DESCRIPTION AND SPECIFICATIONS

An inspection system for analyzing granular shapes, plastics, foods and other products in a laboratory or factory environment precisely measuring granulometry, shapes, sizes and colors detailing spatial and dimensional information. The system combines state-of-the-art computerized graphics processing with a high resolution optics arrangement that can process weighed samples and count grains faster and more consistently than a human being for quality analysis.

OPTICS & ELECTRONICS

Self-contained powerful EDGE Artificial Intelligence computing device coupled with advanced image processing in real time. An embedded AI supercomputer with massive computing capabilities processes images identifying imperfections by color, deformities of shape, size, and fissures in the sample analyzed.

Analysis and images can be seen on the full color display. Information can also be stored to generate reports for statistical quality evaluation, records and quality assurance. The unit is programmed by the user through test samples and image captures of desired and defective products to be analyzed, or by providing high resolution photos of samples to be analyzed.

The unit also trains itself based on sample data and history. Software and specific algorithms can be customized for each application. The type of information displays and reports can be customized by the user. Analysis is done in real time; latency in processing speed is eliminated improving image acuity.

Lab analyzer shown beside. All models are mounted on casters to move easily within the lab or plant to different sample testing locations.

Sample
Analyzer™



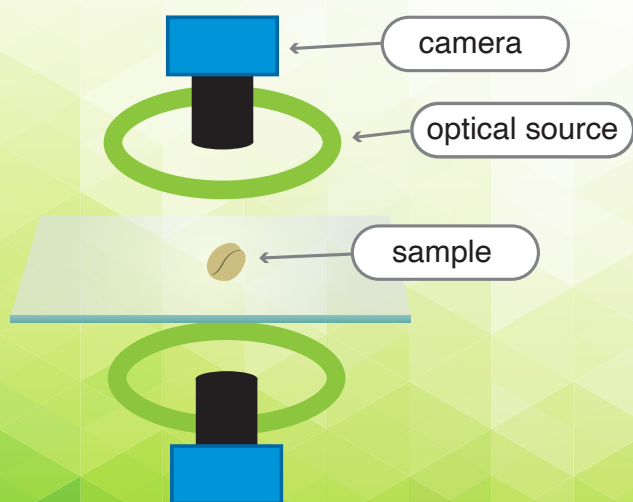
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TECHNICAL SPECIFICATIONS AND OPERATING REQUIREMENTS

Computing Architecture	GPU accelerated computer for deep learning. The Graphics Processing Unit, or GPU, is designed to quickly render high-resolution images and video
System Processing Speed	32 TOPS (Trillions of operations per second, I.E., Tera operations per second)
Cameras	2K full color linear scan camera
Lens	Ultra High-definition telecentric photographic quality lens
Illumination System	Double row long life linear LED lighting system
Analyzing Speed	300g / <4min 500g/ <8min
Housing	Electronics and optics components are contained in 304 stainless steel housing impervious to dust for use in industrial environments
Display	21" full color Philips 22V8/93. The unit can be connected to a remote desktop PC to store or print out statistical reports, histograms, and for cloud computing
Safety	Conforms to UL standards Sealed enclosure provides protection from dust, oil, and other non-corrosive material and protection from water
Voltage	120-220 VAC/60 or 50Hz/1-phase
Power Consumption	1,000 - 1500 Watts
Operating Temperature	Minimum 14°F (-10°C) to Maximum 110°F (43°C)
Humidity	<85%
Net Weight and Dimensions	L x W x H 35"x 23"x 48" 315 lbs

THE OPTICAL STRUCTURE:



The structure is similar to that of a color sorter machine but the image quality is superior because of the use of a telecentric lens with high depth of field and because of the advanced GPU.



Houston, Texas USA • Phone: 713.464.7407
deltatechnology.com • info@deltatechnology.com

