



VideometerLab

Accurate color vision made easy

VideometerLab is a vision-based system for color and texture measurements. VideometerLab integrates illumination, camera, and computer technology with advanced digital image analysis and statistics. It is an easy-to-use system for accurate quantitative measurements of visual properties of samples or surfaces.

An imaging device like the VideometerLab has an advantage in handling natural and industrial materials that have surfaces with non-uniform color and textural properties. VideometerLab can selectively measure color in areas that are most representative for the measurement in question. Furthermore, the system can provide robust quantitative measurements for other visual properties of the sample.

Outperforms conventional methods

Conventional color measurement techniques like colorimeters and spectrophotometers measure color as an average of an area. Color texture or topographical texture will, however, in such situations bias the color measurement. VideometerLab is also more objective, portable and reproducible than panel score units (PSU) obtained with test panels.





VideometerLab

Visual quality assessment in many application fields

The patent pending technology in VideometerLab features:

- Acquisition system
The system contains a high-intensity integrating sphere illumination combined with 3CCD camera technology. The well-defined, homogeneous, and diffuse illumination of the optically closed scene enhances the true color characteristics and suppresses gloss and topographical effects.
- Calibration
The computer controlled image acquisition system in VideometerLab can be calibrated and set up to optimize the dynamic range for any part of the color scale from the brightest white to the darkest black. Image corrections based on the geometrical and color calibrations are performed automatically as you measure. This provides standardized images with well-defined geometry and color coordinates.
- Image analysis
Standardized images are analyzed either using tools from a generic toolbox or a plug-in application. Plug-in applications are specifically tuned for the application domain and provide a number of measurements for this domain. We develop new plug-ins on request.
- Automated reporting
VideometerLab will save information about a measurement session in a database for readily available viewing, summarization, reporting, export and integration of other measurements. The standardized images can also be stored for later reference.

VideometerLab - customized solutions

VideometerLab is designed for visual measurements in laboratories and on relatively small samples with up to 100 mm radius. Customized solutions can be made on request for larger samples or for production line measurements. Multispectral versions and versions with customized spectral properties can also be made available.

VideometerLab - a flexible tool for a wide range of industries

- Surfaces/materials
Visual quality of surfaces and materials can be measured very accurately and objectively. VideometerLab measures color and texture and summarizes these measurements in application-specific quality parameters. Products like textile, paper, fur, wood, metal, ceramics, plastics, and tile can be measured.
- Biotechnology
VideometerLab can support a range of applications in the biotechnology industry - from identification of microbial communities in petri dishes to visual assessment of enzymatic treatment effect.
- Food industry
Visual properties are often very informative quality indicators in the food industry. VideometerLab easily measures color and color texture related properties of e.g. bread, cheese, meat, sugar, grain and other granular foods.
- Graphical industry
Color reproduction measurements on material with non-uniform color or color texture can now be measured accurately.

VideometerLab has enabled mycologists to do a direct visual identification of fungi grown in Petri dishes.



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