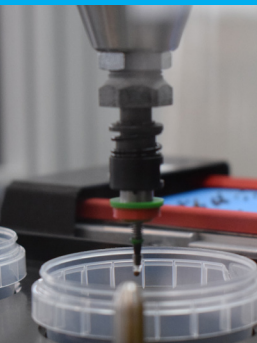The Videometer SeedLab uses advanced machine learning algorithms to classify seeds in the Blob Analyzer Tool.

The pick and place robot detects each seed's center to sort and place it in its container. It can pick even the smallest seeds, like OSR.

The Videometer SeedLab is an AI-driven system that automatically performs a complete analysis and sorting of your seeds and grains

Videometer SeedLab

Enhance the capacity of your seed analysis with the Videometer SeedLab - a complete system capable of analyzing, classifying, and physically sorting your products with the aid of a powerful pick and place robot.

The system is easy-to-use and completely automated: pour your seeds in the SeedLab's external tray, select the machine learning-based classification model and press start on the software to launch your analysis. The instrument will then automatically inspect your seeds based on their physical and chemical features and place them in separate containers.

The Videometer SeedLab uses advanced spectral imaging technologies and machine learning algorithms to guide the robot arm to pick the seeds and sort them automatically.

The picking system is fast and easy-to-use, allowing you to increase the efficiency of your quality operations.

Videometer SeedLab
KEY FEATURES AND ADVANTAGES

- The vibration unit distributes granules evenly onto the belt, in single layer formation.
- Segmentation routine extracts granules, separates touching granules and creates blob images for all granules in the sample.
- Classification models classify granules based on color, shape and texture features.
- Feature sets define features to be calculated and summarized for each fraction/class defined by the prediction model.
- Images of granules and analysis results are displayed during the measurement.
- Summary report is created automatically at end of measurement.
- Pick and place robot automatically sorts granules based on classification results.

Videometer SeedLab
TECHNICAL SPECIFICATIONS

Sample size	Standard up to 1.5 liters. Larger sample sizes possible by customization.
Size and weight	192 cm (H) x 90 cm (D) x 130 cm (W) - 430 kg
Examples	Examples with speed estimates: Corn (maize) kernels: 200 kernels per minute analyzed, 30-60 kernels per minute picked. Oilseed rape: 2500 kernels per minute analyzed, 30-60 kernels per minute picked.
Sample distribution	Vibrator unit with adjustable vibrator profiles for different sizes and types of granular products.
Software	The Videometer SeedLab option is controlled by and comes with the VideometerLab Software, including the Blob Analyzer Tool.

The Videometer SeedLab Interface allows for easy-to-use and accurate analysis.

Applications and Customization
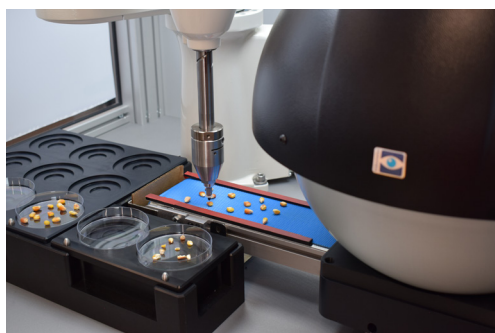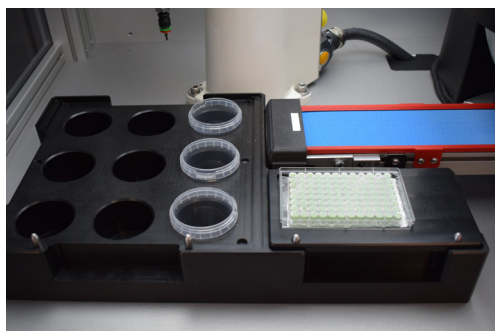
Customize your containers with different options, based on your products and needs.

Applications

- Granular products, including seed and grains.

- Applications in food, feed, agri, pharma and more.

Customizations:

- Customizable suction cups, based on product's size, weight, shape and height.

- Customizable picking speed.

- Customizable delivery bins based on product need e.g. cup holder, petri dish holder, 96 well micro-titer plate.

- Additional multi-spectral fluorescence option with filter changer.

- Additional front light option.

- Customizable illumination based on products.

The Videometer SeedLab is made of a VideometerLab with Autofeeder option and a pick and place robot arm that automatically and physically sorts your seeds based on their classification.

Videometer offers a wide range of spectral imaging instruments measuring what you see with your eyes – and beyond. They are fast, non-destructive, versatile, and reproduceable with world-leading accuracy. The accompanying Videometer software provides a unique variety of machine learning and AI spectral imaging analysis tools. Laboratory, at-line, on-line, and in-line systems are designed for quality assurance, process control, PAT, and product development.
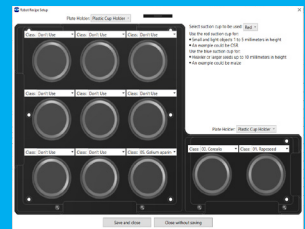

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