

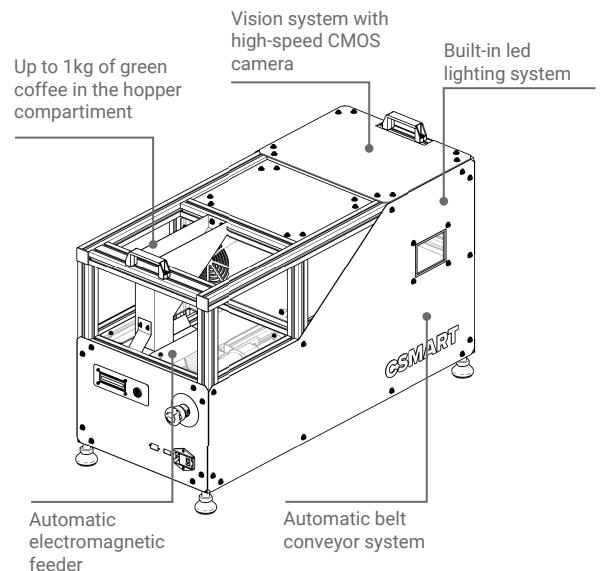
AI-BASED GREEN COFFEE CLASSIFIER

CSMART DIGIT

It's Time for Digital Analysis

- Whether in the specialty or mainstream market, green grading remains one of the key aspects of pricing and an important overall quality indicator.
- Manual grading is costly and labor-intensive, often happening less frequently than necessary as one single lot can have multiple analysis as it moves along the coffee value chain.
- As grading is based on statistical samples, sometimes representing hundreds of bags, a single faulty analysis can lead to large financial losses.
- Even with accurate manual grading, most batch information is lost as usually little or no data is stored in a structured way.
- Digital analysis ensure consistency and accuracy, reducing subjectivity and providing business intelligence.
- Csmart.ai proposes to collect and analyze data on a large scale, incorporating transparency, traceability and efficiency to the process.

Suited for: Farmers, Cooperatives, Dry-mill Facilities, Traders, Exporters, Roasters and Importers



Patent Pending
BR 102022007848-3

Grading Capacity:

12 analyses/hour*

Dimensions: 86(L) x 54(W) x 36(D) cm

Acquire quality data using the Csmart-Digit device, classifying samples according to the SCA, COB, or NY system. Use our existing AI models or request the development of custom models to classify new origins or unique processing methods. Upload results online and share them with partners and customers. Classify, analyze, and compare samples, implementing end-to-end traceability.

*1 analysis = 300g or approximately 2300 seeds

1. Buying/Selling

Evaluate coffee quality while in the field and assist in price formation based on classification systems such as SCA, COB, NY and others.

Suited for: Farmers, Cooperatives and Exporters

2. QC Labs

Automatically assess green coffee quality, storing massive volumes of data, and generating business intelligence.

Suited for: Cooperatives, Traders and Exporters

3. Dry-Mill Operation

Incorporate the device into an existing production line, validating equipment operation based on descriptive quality parameters.

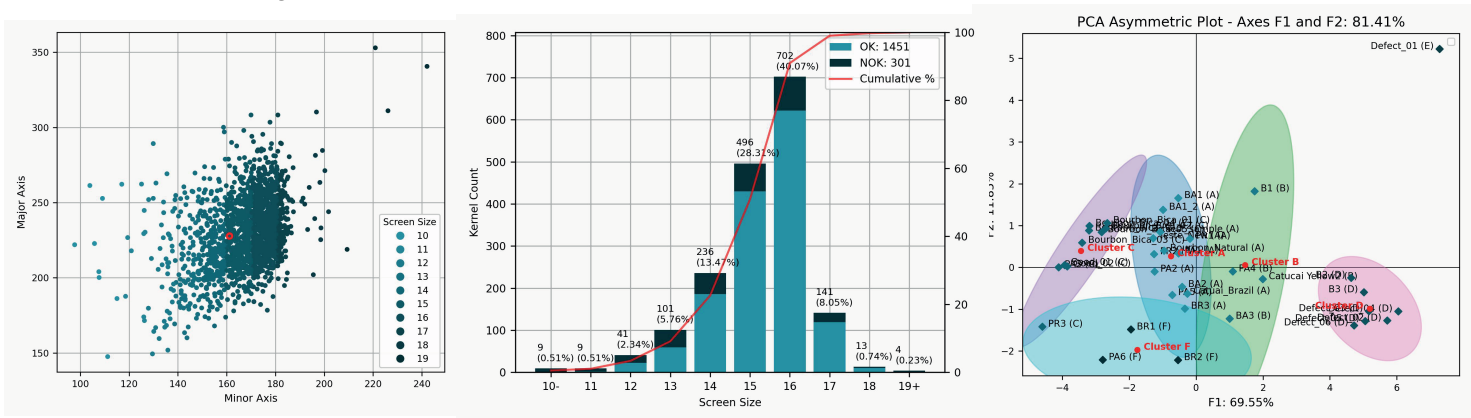
Suited for: Cooperatives, Dry-mill facilities

4. Retail Side

Validate contracts and utilize tailored tools to statistically compare lots. Incorporate traceability along the value chain, sharing data with customers and partners.

Suited for: Roasters and Importers

Features Summary



Individual Seed Analysis

- 6 Geometric Features
- Screen Size
- 5 Color Features
- 3 Texture Features
- Individual Cropped Image
- Class Probability

Batch Analysis

- Seed Counting
- Screen Size Distribution
- Classification Metrics
- Descriptive Statistics
- Green Grading Report

Batch Comparison

- PCA Analysis
- Dominant Color Comparison
- Exploratory Analysis
- Blend Detection (New)

