

BOLERO

Volume Measurement

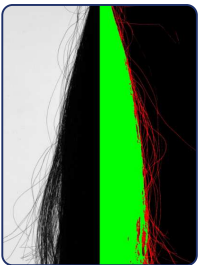
Fly-away & Frizz Analysis



Full 360°
Vizualisation



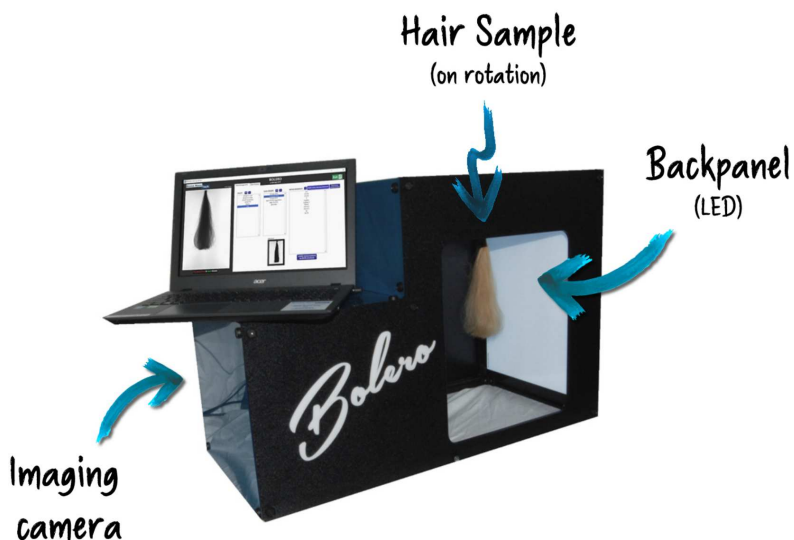
Bulk & Frizz
Separation



3D Volume
Reconstruction



Hair swatches are not easy to analyze due to their composition from a multitude of individual fibers whose boundaries are not well defined. Because of this it is nearly impossible to use a commercial 3D scanner to reconstruct the 3D shape of a hair swatch.



BOLERO is an imaging system dedicated to reconstructing 3D volume and analyzing fly-away/frizz analysis of hair swatches. It measures light transmission variations on a sequence of images to evaluate hair density, and separates bulk and frizz areas over the full body of a hair swatch.

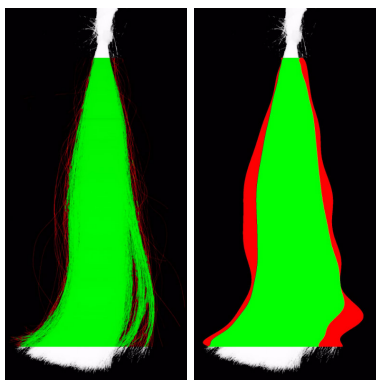
SPECIFICATIONS	
VISION	Monochrome (B & W) 8-bits depth 2400 x 1480 px ² resolution 300 x 185 mm ² FOV LED Illumination panel
HAIR SWATCH	Any color Length from 5 to 25 cm Typical hair weight = 20 grams
SOFTWARE	BOLERO 4.35 or higher
ACQUISITION	Measurement time < 1 min 36 Images per hair swatch 1 Image every 10°
DATA	Volume of swatch % of Fly-Away/Frizz Black/White Raw Images Processed Images 3D XYZ Point Cloud Excel Export
SYSTEM	Size : 15" x 30"x 20" (37,5 cm x 75 cm x 50 cm) 110/200 VAC 50/60 Hz

BOLERO SOFTWARE

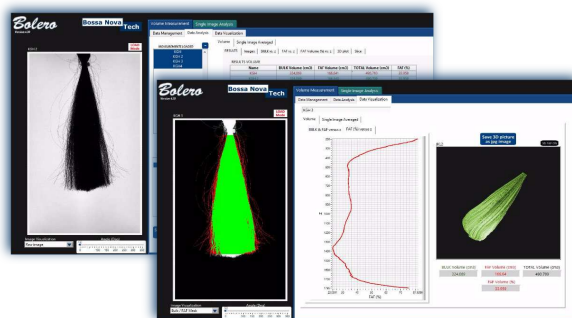
Based on the acquisition of a sequence of contour images of a swatch, BOLERO delivers a 3D model of the hair swatch. The system also simultaneously provides volume measurements as part of the 3D model, including fly-away/frizz analysis.



Raw Image



Processed Images
Bulk & Fly-away



Using the BOLERO Software, you can easily :

- Acquire your images with a simple study organization system
- Get an extensive analysis on the volume and frizz properties of your hair samples
- Compare multiple samples
- Export all your data including images, graphs and tables