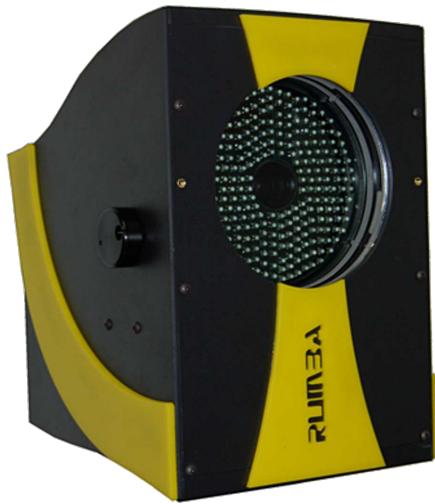
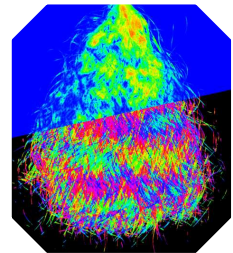


RUMBA



**Orientation,
Straightness
& Alignment
Studies**

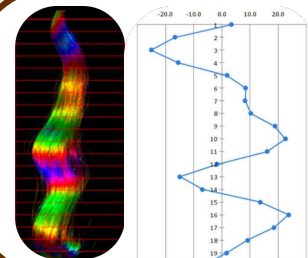
**Straightness
& Alignment**



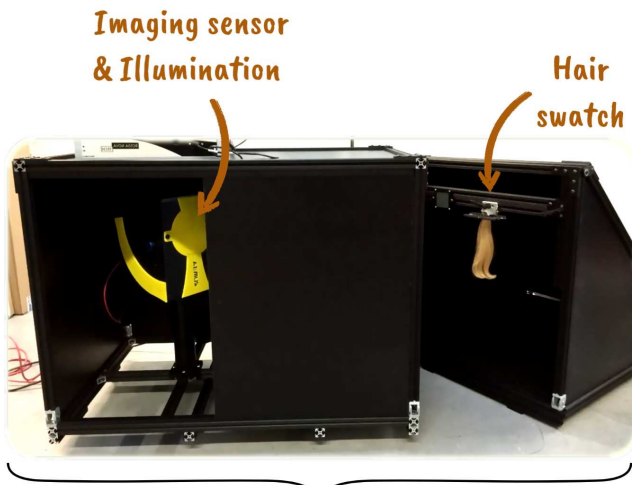
**In-Vivo & In-Vitro
Measurements**



**Spatial
Analysis**



While hair color or hair volume has a standardized definition, "styling" doesn't. However, some properties like straightness or alignment - directly related to the shape of hair - may give some insight into how some product - hair blower, dryer, straightener, lotion, etc. - will affect hair styling.



Lab Setup

RUMBA is a polarization imaging system that takes successive images of a hair sample illuminated with infrared LED and under several polarization states. It allows the mapping of the hair orientation on a 2D image. From this data, **straightness and alignment properties** of your hair sample can be extracted.

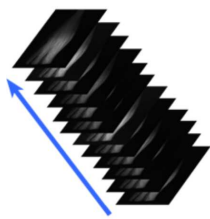
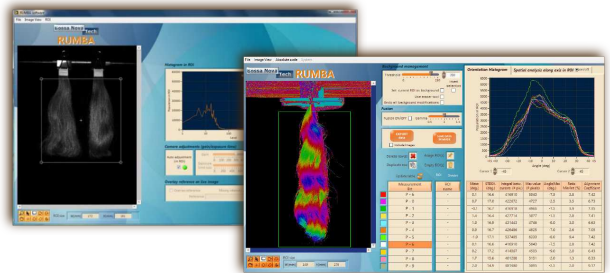
SPECIFICATIONS

VISION	Monochrome camera 12-bits depth 2330 x 1750 px ² resolution Adjustable focus Illumination - Pulsed LEDs @850 nm
HAIR SAMPLE	Any color - Any shape Hair tress Mannequin head Consumer head
SOFTWARE	RUMBA Software
ACQUISITION	Measurement time < 1 sec In-Vivo & In-Vitro
DATA	Orientation 2D mapping Alignment 2D mapping Straightness/Alignment analysis Spatial analysis Excel Export
SYSTEM	Head Sensor : 7" x 10" x 9" - 10 lbs (178 mm x 254 mm x 229 mm) - 5 kgs Lab setup : 72"L x 24"W x 31 "H (185 cm x 65 cm x 80 cm) 110/200 VAC 50/60 Hz

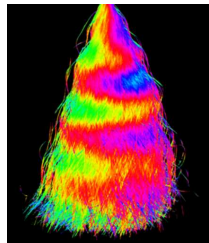
RUMBA SOFTWARE

Raw images from the sensor of the **RUMBA** first have to be processed through its dedicated software to obtain the orientation and alignment mapping of any hair sample.

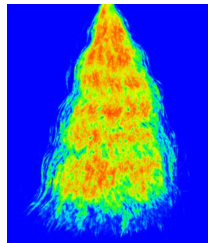
Using those images, the **RUMBA** software can extract straightness and alignment properties of your sample. A spatial analysis can also be done, if you want to focus your research on a specific part of your sample - root, middle part or tip.



Raw Images Acquisition



Orientation Image



Alignment Image

With the RUMBA Software, you can easily :

- Adjust acquisition parameters, launch measurements and process your images
- Get valuable metrics regarding the straightness and alignment properties of your hair samples
- Compare images and numerical data of multiple samples
- Export all your data including images, graphs and tables