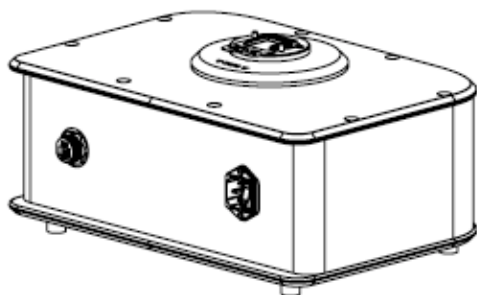
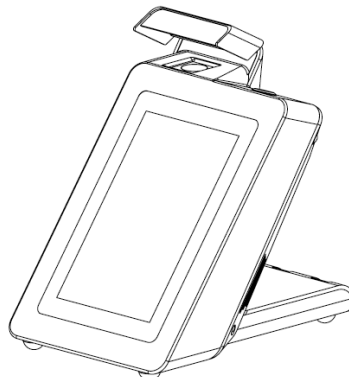


Hardware Specifications of the Luminary Products



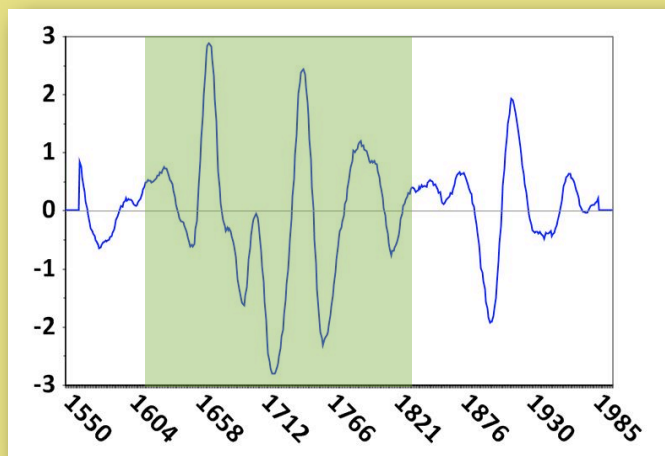
The Luminary™ Profiler



The Beacon™

	Profiler	Beacon
Dimensions (L x W x H)	230 x 340 x 160 mm	220 x 160 x 210 mm
Weight (lbs)	11.5	4.2
Power Consumption (W)	15	15
Input Voltage (VDC)	12	12
Lamp Type	Tungsten Halogen	Tungsten Halogen
Lamp Life (hrs)	2000	2000
User Interface	iPad Mini	On-Board Touchscreen
Environmental Rating	IP65	-

Example of NIR Spectrum



The green shaded area depicts the main range for cannabinoids in NIR

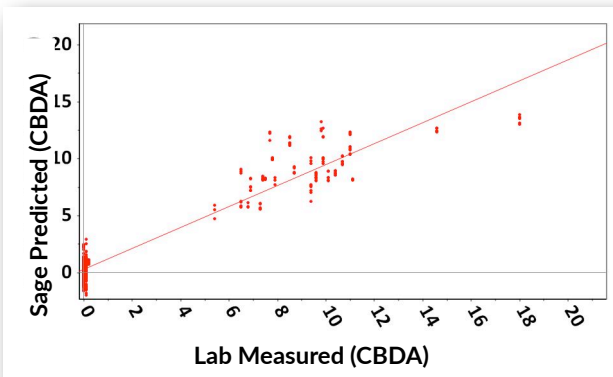
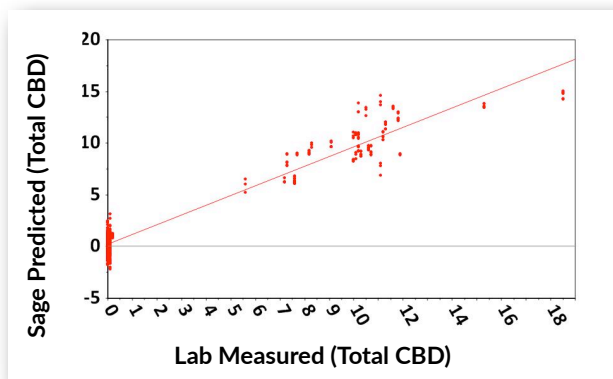
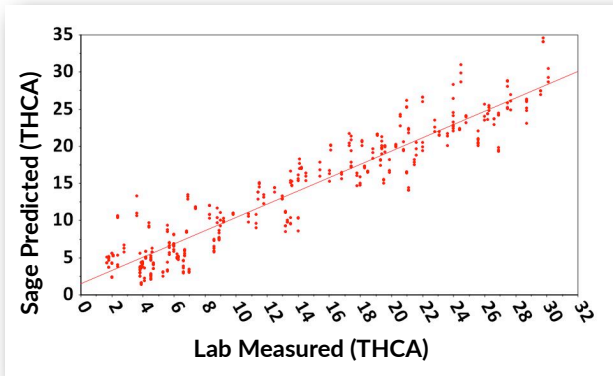
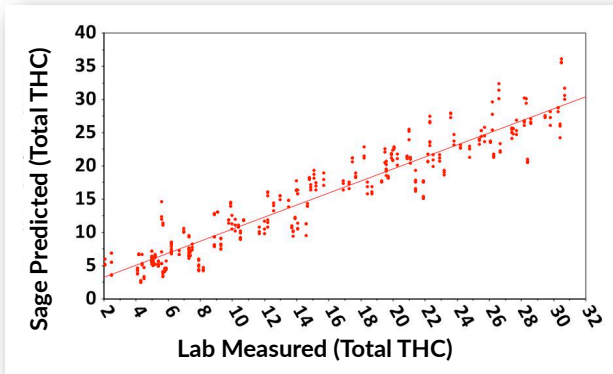
Specifications for the application of using the Luminary products for the analysis of cannabis potency

- Spectral Range: Luminary Profilers and Beacons utilize the 1550-2000 nm window of the near-infrared fraction of the electromagnetic spectrum. This range was experimentally determined to be of the most value for the analysis of cannabinoids using analytical THC and CBD standards. Additionally, the measurement of THCA v. THC, and CBDA v. CBD standards was evaluated to add in determining unique peaks to acidic or neutral cannabinoids.
- Number of Samples used to Develop Data Model:

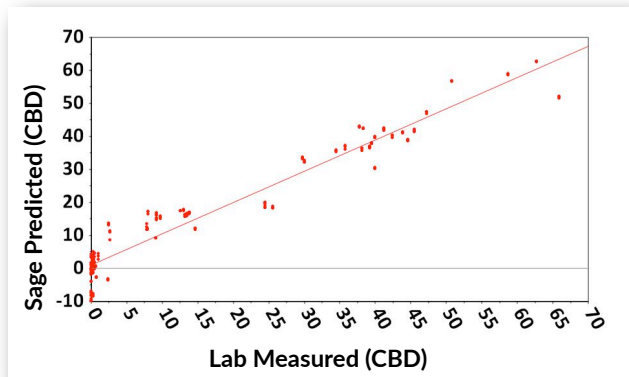
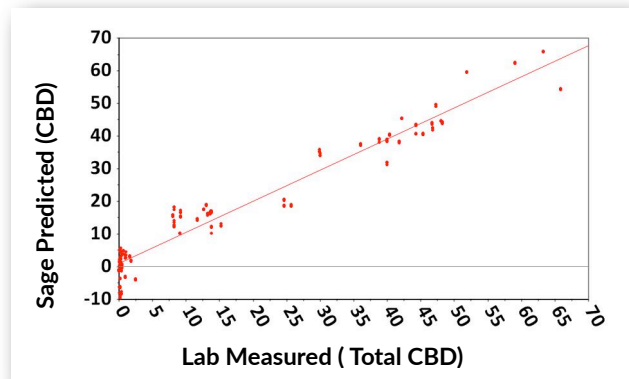
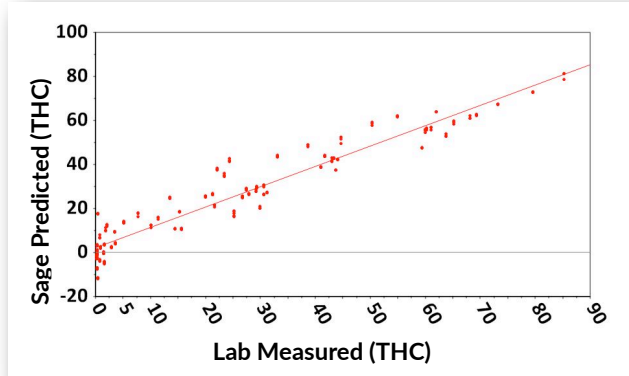
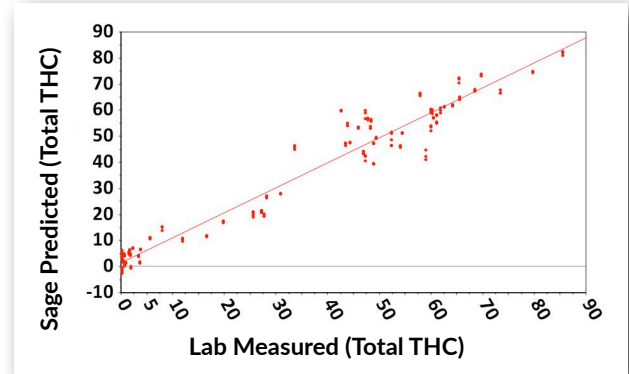
Flower=399; Concentrates=557

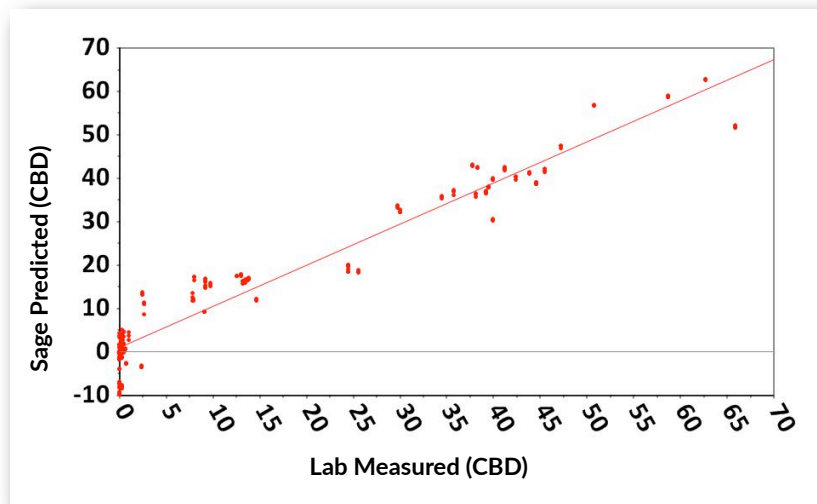
Example of Lab v. Luminary Potency Comparison

FLOWER



CONCENTRATES





In the above plot, the x-axis shows the lab measured Total CBD (in concentrates) potency value, while the y-axis depicts that predicted from the Luminary. A table of the metrics associated with the above plot is provided below, and demonstrates the type of data that is used to evaluate whether a model is considered accurate and robust. The root mean standard error (RMSE) of prediction for an independent set of data is used to validate the model. This is the error one could expect in the predictions generated from the data model.

Model	R ²	RMSE%
Flower-THCA	0.89	3
Flower-CBDA	0.92	1
Flower-Total THC	0.90	3
Flower-Total CBD	0.94	1
Concentrates-THCA	0.91	8
Concentrates-THC	0.91	7
Concentrates-CBD	0.92	6
Concentrates-Total THC	0.95	6
Concentrates-Total CBD	0.95	4
Concentrates-CBN	0.16	1

- Example Metrics: Standard Error in the Luminary Predictions: +/- 10% relative standard deviation (RSD); this simply means that the error is ~10% of the potency value (20 +/- 2%, 40 +/- 4%, etc.). Although this number is rather ubiquitously given out by labs, we broke up regions of our plots into smaller ranges to get a better picture of what the error was in these specific regions.