



# Pharma Potency Testing Technology for a Growing Cannabis Industry

Would you feel safe taking your occasional dose of two Ibuprofen for a headache if you knew that less than 1% of the tablets are tested for potency? Neither would we. Yet that's precisely the state of affairs in the cannabis industry, compared to 100% testing rates in pharmaceuticals.

With more and more states legalizing marijuana for adult, use and/or medicinal purposes, variations in the accurate potency testing of cannabis strains have increased tremendously. At the same time, consumers are increasingly aware of the different properties and effects of THC, and CBD, and are seeking more exact information about the products they purchase and ingest. Policy makers and regulators are scrambling to ensure that all products are tested with high accuracy and reliability, and that consumer safety and awareness is a top priority. Some states have already set regulations requiring potency testing and labeling, and many others are considering similar regulations.

That's why you need the Beacon™ or Luminary Profiler™ from **Sage Analytics**. This marijuana potency-measurement system dramatically streamlines potency profiling for Total THC, THC-A, Total CBD, and CBD-A for both flower and concentrates, benefitting all stakeholders in the industry and improving consumer confidence, health and safety.

Adapted from state-of-the-art spectroscopic technology from the pharmaceutical industry, the Beacon and Luminary Profiler provide highly accurate measurements in the quickest, easiest and most cost-efficient manner, while remaining eco-friendly and fully portable. Simply place a ground sample in the bud holder, initiate the test via the easy to use touchscreen interface, and the sample's potency profile instantly appears on the screen. All for mere pennies on the dollar compared to time and resource intensive methods common today.



## **Proven Technology**

Developed and proven by its sister company, Prozess Technologies of St. Louis, Missouri – whose analytical optical-testing equipment is already in use by 20 of the top 25 pharmaceutical companies world-wide – the Beacon and Luminary Profiler are based on the latest advancements in spectroscopic technology. We've customized this technology specifically for the cannabis market, to bring you a potency profiler that provides accurate, laboratory-grade results in seconds, at a very affordable price.

Over a decade ago, the Food and Drug Administration (FDA) advised Pharma to transition to spectroscopy as more accurate, simpler, cleaner and less expensive method of potency testing, to replace the complex gas chromatography (GC) and high performance liquid chromatography (HPLC) machines and processes that were the Pharma standard. Spectroscopy has become the industry standard for Pharma, and now the Luminary Profiler can do the same for the cannabis industry, which still depends on the lower throughput chemical testing methods.



## The Science

Spectroscopy studies how matter interacts with light. This technology can be used to determine the chemical potency of a sample. Like the analytical systems produced by Prozess, the Beacon and Luminary probes a sample with near-infrared (NIR) light measuring the samples chemical composition at the molecular level for instantaneous potency evaluations with laboratory grade accuracy.

Near-infrared (NIR) light – that region just beyond the red light that our eyes can see – has become increasingly popular, because it contains a wealth of information and can be measured very quickly. The Beacon and Luminary Profiler use the most information-rich portion of the NIR range (~1500 to 2000 nm), where chemical features are significantly more pronounced and immune to unimportant factors like the cannabis strain or color.



## Finally, Greener Testing

Chloroform. Methanol. Acetonitrile. These are just a few of the highly toxic chemicals commonly used in the GC and HPLC methods. Along with the dangerous and costly storage of these chemicals pre-testing, this also generates chemical waste during and after testing – all of which has to be disposed of “safely” – along with now-contaminated and worthless test samples.

The Beacon and Luminary Profiler need no chemicals, create no waste, and are completely safe for the handlers and the environment. All you need is electricity, and to change the lightbulb every 2000 hours or so!



## Faster, Accurate and Repeatable

The Beacon and Luminary Profiler measure samples in approximately 10 seconds, which increases throughput, meaning a much larger range of samples can be tested on a daily basis, in any sector of the industry. This makes accuracy more consistent and less reliant on averages taken from small percentages of stock. This is especially critical with cannabis (or in fact any natural substance) as a plant’s potency can vary considerably from top to bottom or bud to bud.

Both the Beacon and Luminary Profiler also drastically reduce costs over the long haul: The conventional, remote laboratory technology requires highly trained technicians, the use of toxic chemicals and hazardous emissions, plus several hours (if not days) to receive results, due to backlogs or courier services. Any sector can now derive highly accurate, repeatable results in a flash, at a fraction of the cost.



## Pennies vs. Benjamins

Which sounds more cost-effective: Spend up to \$300,000 for the equipment, laboratory space, chemical storage, and insurance, then pay more for the people and supplies – not to mention the down time while waiting for results? Or simply spend \$23,900 once for the Beacon or Luminary Profiler that anyone can use anywhere, with no other processing costs?

Our systems reduce the costs of compliance with existing or anticipated testing requirements, and open the door to new marketing opportunities through affordable on-site testing in the laboratory, grow house, extraction facility or retail dispensary.

