



PL01 Batch Report
Scientifically Verified[™] to **outperform** pure CBD



hemp

- Recent studies show that most CBD products do not have the amounts represented on the label & are highly contaminated with chemicals
- Pure Lyfe works with biologic research labs to test the **activity** of our products in human cells
- Pure Lyfe sources its hemp from USDA organic farms, never any pesticides used
- These are the background and results from our initial batch test

Bottom line: PL01 is more effective, especially in smaller servings, than pure CBD

Effective at smaller servings = More bang for your buck

Introduction

Many emerging industries undergo periods where sorting out who can supply high quality products can be challenging for the consumer. This is no different for hemp/CBD products. A 2017 study conducted by the University of Pennsylvania found that only 30% of the CBD products tested were within 10% of the level they promised on the label and another study by Ellipse Analytics found 70% of the top-selling CBD products were “highly contaminated”.

In order to ensure quality for our customers we not only provide 3rd party analytical results on the components of the product, often referred to as a certificate of analysis or COA, we also test each batch to verify its performance against pure CBD to ensure its effectiveness. **Our tests involve measuring the expression of specific genes in human cells, which through the induction of immune & inflammatory responses, we believe is an indication of the effect of the stresses that we all encounter in everyday life “stress genes”.** This is the report for our first batch of hemp products “PL01”. **The lower the expression, the better.**

Background of the experiment

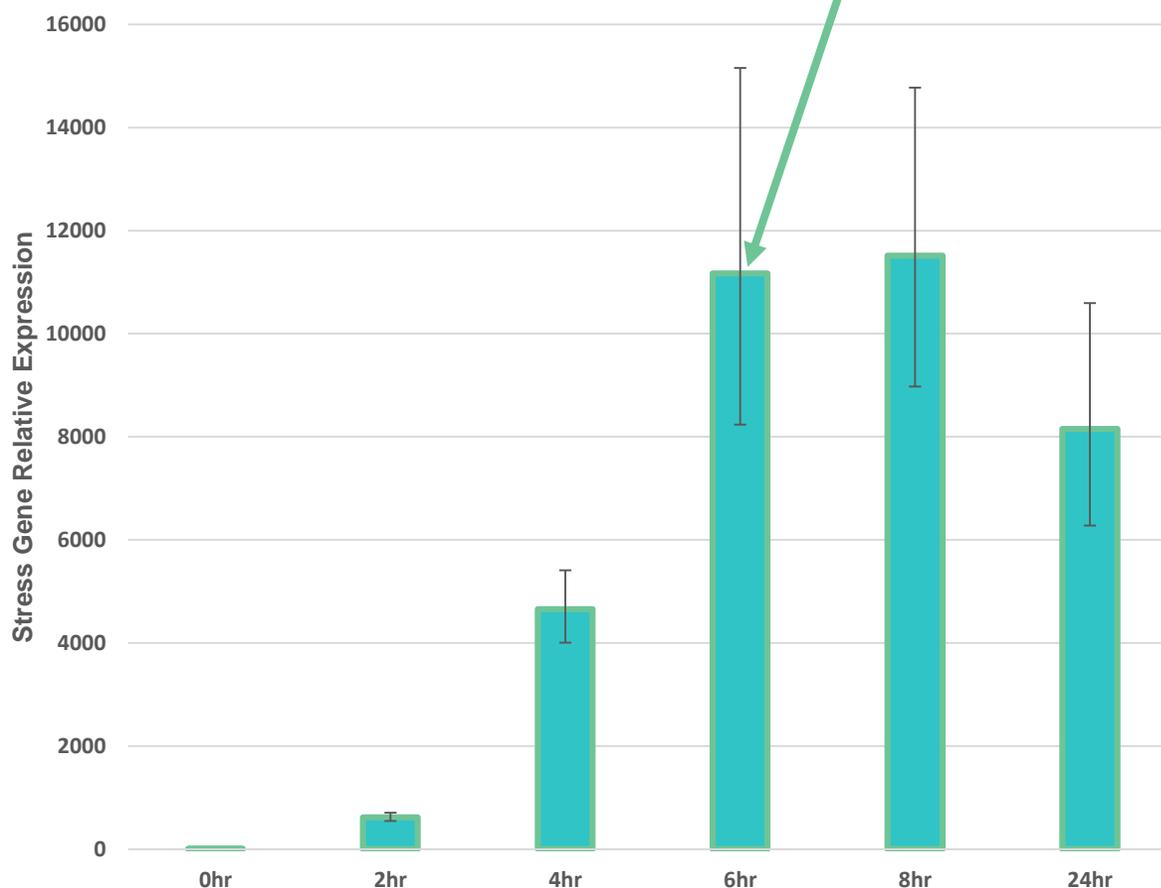
Human cells were grown in the presence of hemp cannabinoid extract PL01 and pure CBD in medium chain triglyceride oil (MCT) for 24 hours. In the experiment, concentrations were normalized to 50 mg/mL (our full-strength products concentration), and further diluted to 10, 5, 2.5, and 1.25 µg/mL. Cells were then stimulated with specific chemicals to increase stress gene expression. Cells were harvested 6 hours post stimulation and the mRNA expression levels of stress genes were assessed by quantitative polymerase chain reaction (qPCR). Stress gene expression was normalized to b-Actin control expression.

Untreated/Unstimulated- No Cannabinoid pre-conditioning, no stress gene stimulation.
MCT- Coconut oil with high composition of medium chain triglycerides (MCT).
PL01 - Full spectrum extract from hemp.
CBD/MCT- >99% purified cannabidiol (CBD) isolate dissolved in MCT.

Optimization of stress gene induction.

6-hours post chemical stimulation is optimal for stress gene expression

Stress Gene Induction Time Course



PL01 vs. Pure CBD

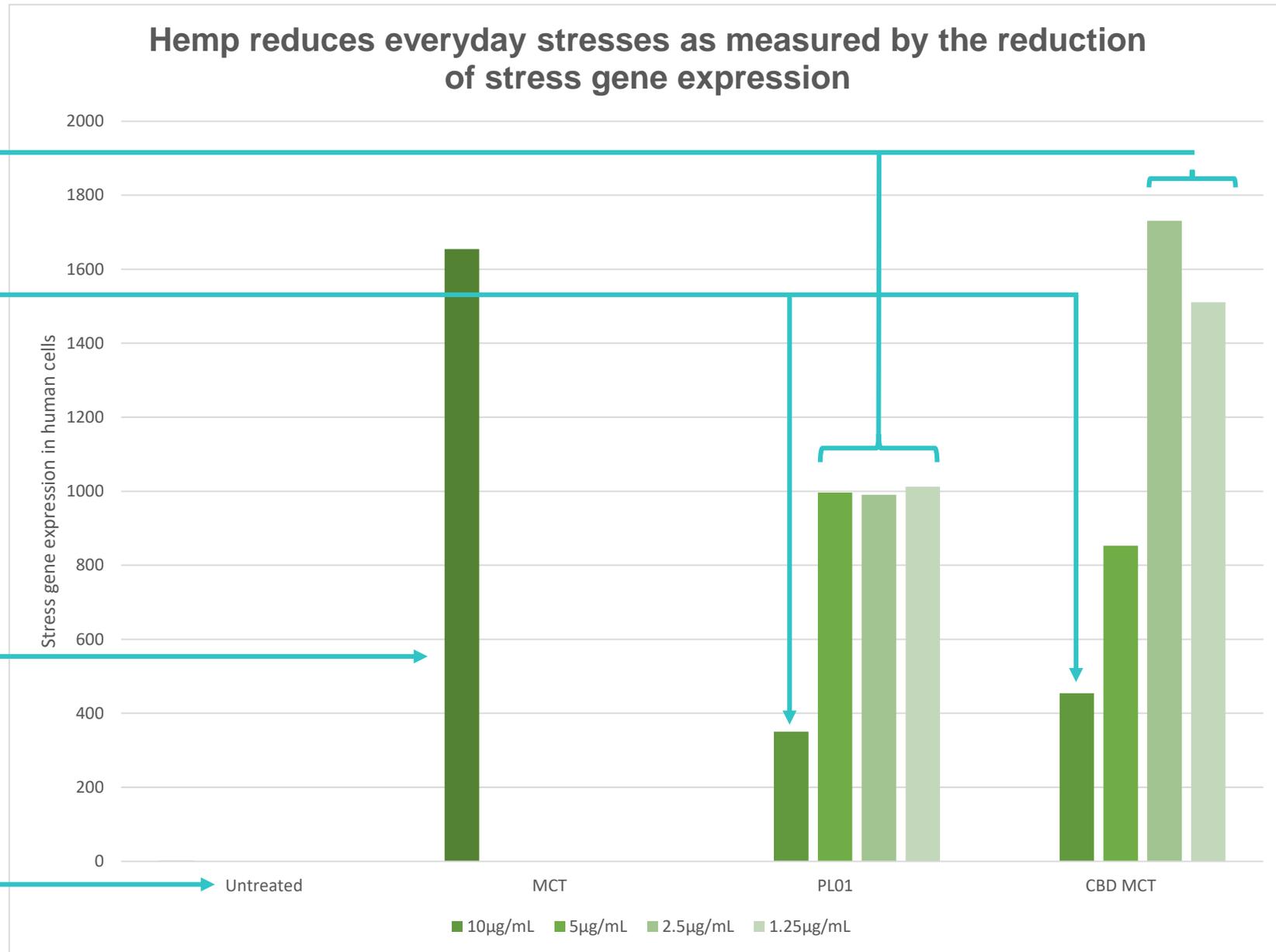
At lower servings PL01 significantly reduces everyday stress, whereas pure CBD has little to no effect.

At the highest servings pure CBD almost catches up but PL01 maintains superiority in effectiveness.

These data indicate that **PL01 may be a more effective, safer and more cost-effective product than pure CBD.**

Stress gene expression is induced in cells & MCT oil alone does not reduce expression

Untreated = no induction of stress genes. As expected, there is no expression



A word on sourcing from USDA certified organic hemp farmers

We source organic for human & environmental health

Pure Lyfe sources its hemp from the Bluegrass region in Kentucky. The hemp is grown USDA certified organic (and thus non-GMO) by local farmers. The passing of the 2018 Farm Bill legalized hemp federally which is a great thing, but along with it came the approval of pesticides. While the use of pesticides and herbicides may improve yields for the hemp fiber market which is not meant for consumption, we believe that sourcing our products from USDA organic hemp is the right thing to do for our customers. When hemp is processed into products it is essentially concentrated into an oil, if there are pesticides on the plant these will also be concentrated into that oil which is consumed. Therefore, USDA certified organic hemp products are the safest and healthiest for you and the environment.

Our approach is to develop deep and long-lasting relationships with the farmers who give the hemp industry its life. We focus on fair agreements; open communication and we never sacrifice quality or safety for anything.