Objectively quantifying cannabis effects through AI-driven EEG analysis

zentrela

SUMMARY

The cannabis industry lacks an objective and standardized way of measuring the effects of cannabis products in order to guarantee they create the intended effects to specific consumer audiences. Existing drug tests are unreliable. Subjective drug effect tests are biased and body fluid analysis is limited to only measuring concentration levels of cannabinoids in the system but not the actual effects they create on the brain. The negative impact at an industry level is that cannabis producers put at risk millions ($) every year commercializing products without having reliably studied if their product create the intended effects and who is their target audience.

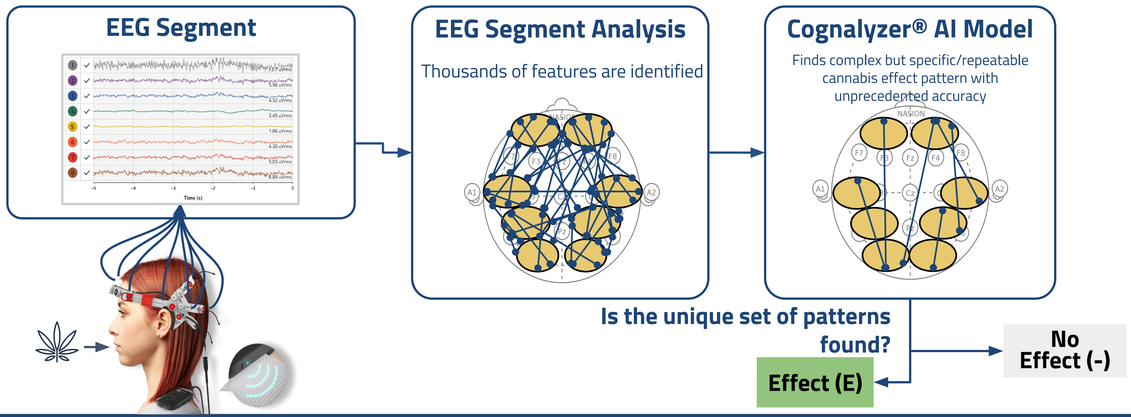
INTRODUCTION

The **Cognalyzer®** is a novel test for objectively quantifying cannabis effects based on consumers' brainwave analysis. It consists of two main components:

1) A portable, low-cost, easy-to-use EEG device that records consumers' brain activity,
2) A library of trained AI models (Artificial Intelligence) that accurately identify complex but repeatable patterns associated with a specific cannabis effect, like intensity of the psychoactive experience (aka the "HIGH"), or relaxation levels.

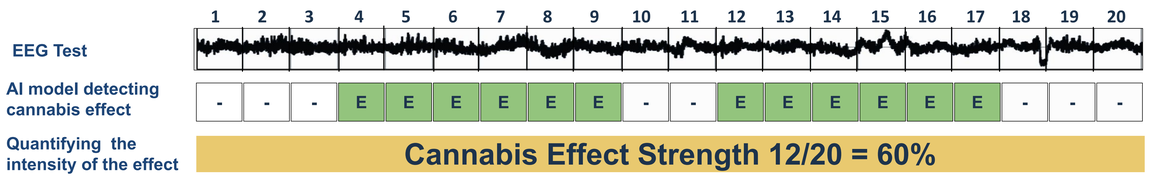
1. AI models detecting a cannabis effect on EEG (brain activity)

AI (Artificial Intelligence) models are trained with unprecedented accuracy to identify complex but repeatable patterns in 5-sec-long EEG data segments related to a specific cannabis effect (e.g. THC psychoactivity, Relaxation, Paranoia/Anxiety, etc.)



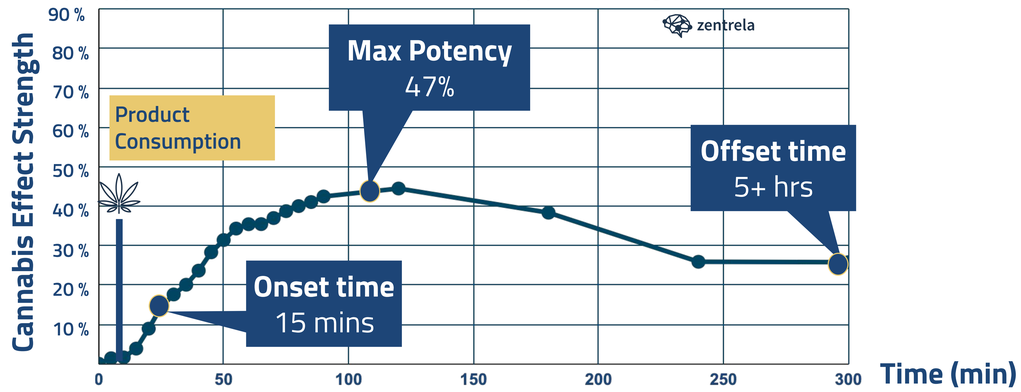
2. Quantifying the intensity of the cannabis effect

A 2-min-long EEG test is administered to a cannabis consumer. The number of EEG data segments altered by a cannabis effect (e.g. THC psychoactivity), determines the strength/intensity (percentage of time) a consumer is experiencing such effect



3. Characterizing a product cannabis effect profile

Multiple EEG tests are administered to a targeted consumer group (e.g. young males 19-25 age) before and after consuming a product. Cannabis effect data is aggregated to generate the profile of such product for that specific target audience.



APPLICATIONS

- **Objectively VALIDATE** the efficacy of drug delivery systems or product formulations.
- **Objectively BENCHMARK** products to identify and discontinue/re-formulate products that perform poorly.
- **Find the OPTIMAL INHALATION** amount (e.g. puffs or hits) of vape products or pre-rolls to avoid unpleasant (paranoia, anxiety) effects
- **Credibly PROVE** the efficacy of products to create the desired effect for the target audience.

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