

Cannabis Essential Oil: A Preliminary Study for the Evaluation of the Brain Effects

- 1) This study, quote – examined the effects of essential oil from legal ... hemp variety on the nervous system in 5 healthy volunteers – unquote.
- 2) Cannabis sativa L. has long been cultivated for industrial purposes but has recently become an additive, quote - in the cosmetics industry, as flavorings for beverages..., and in medicine – unquote.
- 3) Quote – hemp essential oil is a complex mixture of many volatile compounds, mainly monoterpenes, sesquiterpenes, and other terpenoid-like substances. The main chemical components are myrcene, B-caryophyllene, limonene, a-pinene, B-pinene, terpinolene, and a-humulene – unquote.
- 4) Many of these constituents possess individual characteristics generally accepted to include: quote – antidepressant, relaxant, anxiolytic, sedative, antimicrobial, and antioxidant – unquote effects.
- 5) Previous studies have indicated that B-caryophyllene, the 2nd most abundant constituent of Cannabis Essential Oil (CEO), quote – may be useful in treating anxiety and depression – unquote.
- 6) The primary constituent in CEO is myrcene. Myrcene along with other monoterpenes constitute 57.2 percent of the essential oil.
- 7) This test offered a limited pool of subjects, employing five volunteers, but offered multiple suggestive results that indicate that further investigation would be warranted.
- 8) This trial asked subjects to first inhale sweet almond oil (SAO) as a control. Before, during, and after inhalation the subjects were monitored to collect physiological data as well as asked to describe their emotional and physical states. The same was then performed before, during, and after inhalation of CEO.
- 9) Subject data collected included: quote – brain wave activity and ANS parameters such as heart rate, blood pressure, respiratory rate, and skin temperature, as well as the assessment of mood states – unquote.
- 10) The CEO used in this experiment was obtained through steam distillation which yielded 11 percent v/w.
- 11) The inhalation of each essential oil was performed by placing one milliliter of oil on gauze and subjects were to inhale the aromatics, quote – simultaneously with both nostrils – unquote.
- 12) Results of this study indicated that, quote – inhalation of CEO was correlated with changes in ANS parameters and skin temperature significantly increased – unquote.
- 13) Sixty percent of subjects showed an increase in heart rate while 80% showed a decrease in diastolic blood pressure during CEO exposure, but these results are only suggestive as they were not statistically significant.
- 14) Regarding the mood state investigation, quote – all subjects found the CEO pleasant- unquote. Collectively, subjects indicated feeling, quote – more calm, relaxed, and energetic.
- 15) While anecdotal and statistically insignificant, it is interesting to note that one study participant, who entered complaining of a headache, reported the absence of a headache during exposure to CEO.
- 16) Much of these observations may be explained by the exposure to myrcene, which has been shown in previous research to, quote – have a sedative, analgesic, and relaxing activity – unquote.
- 17) Observation of subject brainwaves before, during, and after CEO exposure suggested an impact similar to meditation.
- 18) The small study population used in this investigation limits the ability to draw broad conclusions, but it does suggest that further investigation would be valuable to better understand the effect Cannabis Essential Oil can offer physiologically and emotionally.

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