

## Vetiver

Vetiver (Vetiveria Zizanioides) is an evergreen, gramineous, and perennial herb, and its appearance is similar to that of lemongrass. A tropical grass about 2 - 5m high, vetiver is characterised by its extensive root system that tends to grow deep up to 4m or more. The root yields high quality, woody, and heavy-scented essential oil which is used as a flavouring in canned asparagus and peas, fruit drinks, syrup sweets, etc.

Vetiver root essential oil has demonstrated antioxidant properties that help combat toxins and free radicals, which can contribute to aging. According to Kim et al.'s study in 2005, vetiver oil (VO) exhibited strong free radical scavenging activity, surpassing standard antioxidants like butylated hydroxytoluene (BHT) and  $\alpha$ -tocopherol. Key components of VO, including  $\beta$ -vetivenene,  $\beta$ -vetivone, and  $\alpha$ -vetivone, were isolated and identified through chromatographic techniques. These findings suggest that vetiver oil and its specific constituents have the potential to serve as natural antioxidants.

A study suggests that the volatile compounds emitted from Vetiver roots, particularly in low concentrations, have the potential to enhance performance and stimulate the sympathetic nervous system, making them potentially useful in tasks requiring sustained attention and focus. The study points out that pleasant odors, such as those emitted under low-dose conditions, can improve vigilance and maintain performance without evoking strong emotions. These compounds may have sedative effects on brain activity. (Matsubara et al., 2012)

Using vetiver oil in a diffuser while you sleep could help improve your breathing patterns. A small study in 2009 by Arzi et al. measured the response of 36 people who were exposed to differing aromas, including vetiver, during their sleep. Specifically, vetiver transiently decreased inhalation and increased exhalation for up to 6 breaths following odor onset. Vetiver oil increased the quality of exhalation and decreased inhalation when sleeping study participants detected it. This could mean vetiver oil could help people who snore heavily.

Anecdotally, some people use vetiver oil aromatherapy as a treatment for attention deficit hyperactivity disorder (ADHD). In 2001, a study done by Dr. Terry Friedman found that vetiver oil is effective in treating children with ADHD. The analyses revealed a significant improvement in the pre- and post-treatment Vetiver essential oil group. The relaxing and calming properties of vetiver oil helped the children (the test subjects) combat their ADHD and ADD symptoms, which typically include difficulty in concentrating, diminished focus, being easily distracted, difficulty with organization and following directions, impatience, and fidgety behavior.

## NOTES

- Kim, H. J., Chen, F., Wang, X., Chung, H. Y., & Jin, Z. (2005, September 10). Evaluation of Antioxidant Activity of Vetiver (Vetiveria zizanioides L.) Oil and Identification of Its Antioxidant Constituents. Journal of Agricultural and Food Chemistry, 53(20), 7691–7695. https://doi.org/10.1021/jf050833e
- Matsubara, E., Shimizu, K., Fukagawa, M., Ishizi, Y., Kakoi, C., Hatayama, T., Nagano, J., Okamoto, T., Ohnuki, K., & Kondo, R. (2012). Volatiles emitted from the roots of Vetiveria zizanioides suppress the decline in attention during a visual display terminal task. Biomedical Research, 33(5), 299–308. https://doi.org/10.2220/biomedres.33.299
- 3. Arzi, A., Sela, L., Green, A., Givaty, G., Dagan, Y., & Sobel, N. (2009, November 16). The Influence of Odorants on Respiratory

Patterns in Sleep. Chemical Senses, 35(1), 31–40. <u>https://doi.org/10.1093/chemse/bjp079</u>

- Saiyudthong, S., Pongmayteegul, S., Marsden, C. A., & Phansuwan-Pujito, P. (2015). Anxiety-like behaviour and c-fos expression in rats that inhaled vetiver essential oil. Natural Product Research, 29(22), 2141–2144. <u>https://doi.org/10.1080/14786419.2014.992342</u>
- Chowdhury, I., Fujioka, T., & Nakamura, S. (2000). Induction and adaptation of Fos expression in the rat brain by two types of acute restraint stress. Brain Research Bulletin, 52(3), 171–182. <u>https://doi.org/10.1016/s0361-9230(00)00231-8</u>
- Friedmann, T.S. (2002). ATTENTION DEFICIT AND HYPERACTIVITY DISORDER (ADHD). https://shiningmtnforkids.com/wp-content/uploads/2015/10/adhd-study.pdf