AromaStick Focus







A stimulating scent to help you stay focused.

<u>Ingredients:</u> Organic Peppermint Oil, Organic Rosemary Oil, Organic Cinnamon Bark Oil.

Actively concentrating on a particular task, i.e. giving it our undivided attention, requires a considerable level of mental effort. Our ability to maintain high levels of concentration over an extended period of time is influenced by the interaction of the following three factors:

- 1. our emotional state
- 2. our physical state
- 3. our environment

The use of aromas from essential oils have been shown to have significant impacts on our levels of brain activity particularly in improving focus and attention, information processing speed, and memory capacity (Diego et al. 1998, Moss et al. 2005, Moss et al. 2008). Essential oils have quite specific capacities and depending on the scents, are capable of either increasing levels of concentration while heightening alertness while other scents can reduce tension but at the cost of reducing alertness (Diego et al. 1998, Moss et al. 2008). But scents can also work synergistically (Bassole 2012) which makes blends often more suited when dealing with a number of different factors, such as when tasks require alertness and concentration while remaining calm in the face of pressure, while keeping cool and in control.

The effectiveness of scents, however, is not just down to the essential oils used. In fact, effectiveness highly depends on molecular concentration in the inhaled air (Buchbauer et al., 1993). The release of odors into ambient air via a diffuser will lead not only to a small amount of therapeutic odor molecules being inhaled, but also to rapid habituation due to constant exposure. As a result, any positive effects there might be are lost or greatly reduced (Chaudhury 2010). When working with scents therefore, an important aspect lies in the delivery method. This is where the AromaStick comes in: it delivers scents in a high molecular concentration directly to the nose, while greatly reducing exposure time. This has the additional advantage in that it forces the user to sniff, which is important for transporting scent molecules to the epithelium in the nose, the region where we "smell". At the same time the exposure time is kept to a minimum to avoid habituation. This makes AromaSticks 300% more effective than a scent released into ambient air (Schneider 2016 a).

The AromaStick Focus delivers a blend of essential oils carefully selected to enhance concentration alertness and the recall of information while at the same time keeping you calm and in control.

Peppermint oil has a variety of uses. Tests assessing levels of attention have shown that peppermint oil generally increases levels of alertness, allowing participants to stay focused for longer and perform better (Barker et al. 2003, Moss et al. 2008). In addition, the fresh scent of peppermint oil was shown to help reduce symptoms associated with anxiety and stress (Raudenbush et al 2009, Ali et al. 2015).

Rosemary oil and rosemary scent can also improve cognitive function. Upon inhalation rosemary scent molecules pass into the bloodstream, where their vasodilatory properties can positively impact oxygenation

(Schneider 2018). Rosemary scent has also been shown to have stimulating properties, to improve mental performance (Moss 2012) and to reduce feelings of anxiety and stress (McCaffrey et al. 2009).

Cinnamon Bark oil inhalation was responsible for stimulating the central nervous system, reducing fatigue and improving levels of alertness (Raudenbush et al 2009).

The effects of this combination of essential oils delivered by an AromaStick are in fact directly measurable. Using a d2 test, a standardized psychological test of cognition, the AromaStick Focus improved overall concentration, placing the Focus users in the 92^{nd} percentile and resulted in a 29% boost to cognitive attention and a 19% increase in processing speed compared to the control group. At the same time the error rate was greatly reduced (5% vs 13%). Effects lasted for 15 minutes (Schneider 2016 b).

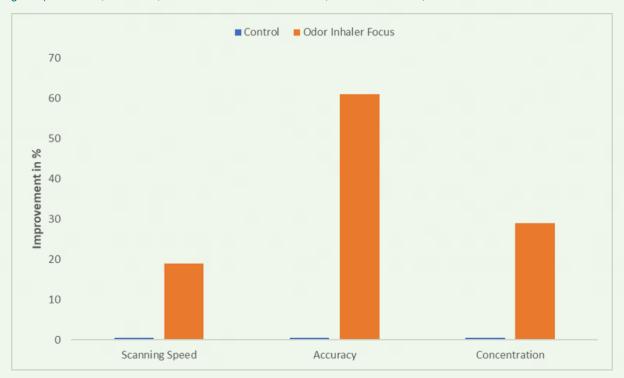


Figure 1: Mean changes in cognitive performance using the d2–Test. Original data and figures [Schneider 2016b]

Every time we interact with our environment, our brain analyses old and new information in order to assess a multitude of possible consequences. At the same time it processes any feelings and emotions associated with the current interaction (Damasio 2010). Olfaction is the only one of our senses with a direct link to the limbic system, the part of the brain responsible for long term memory, mood, emotions and homeostatic responses (Merrick et al 2014). This direct link allows for fast signal processing with the entire process taking place within 150–200ms (Olofsson 2014). All the other senses, such as sight, hearing and touch, are first processed by the thalamus, the front door to consciousness. As a result of this direct link to the limbic system scents are very powerful in summoning up our past. Studies have shown that using scents when memorizing produces superior memories, and that their use could serve as mental cues for memory retrieval during an exam (Hatt 2008).

Thanks to a combination of oils that keep you alert yet calm, and the direct delivery of the scent molecules to the nose, the AromaStick Focus is the ideal helper to boost your concentration and keep you focused.

AromaStick natural inhalers are not medicines and are not intended to be used in place of medicines to treat, alleviate or prevent a health problem or an illness. The purpose of this product information leaflet is solely to provide an introduction to the AromaStick and the essential oils it contains. AromaStick natural inhalers are intended to improve wellbeing in healthy individuals.

References:

Ali B, Al-Wabel NA, Shams S, Ahmad A, Khan SA, Anwar F (2015) Essential oils used in aromatherapy: a systemic review *Asian Pac J Trop Biomed*, 5(8): 589-598

Barker S., Grayhem P, Koon J., Perkins J, Whalen A., Raudenbush B. (2003). Improved performance on clerical tasks associated with administration of peppermint odor. *Percept Motor Skill*, 97, 1007–1010

Bassole IHN, Juliani HR (2012) Essential Oils in Combination and Their Antimicrobial Properties Molecules, 17(4): 3989-4006

Buchbauer, G., Jirovetz, L., Jáger, W., et al. (1993). Fragrance compounds and essential oils with sedative effects upon inhalation. *J Pharma Sci*, 82, 660–664.

Chaudhury Dipesh, Manella Laura, Arellanos Adolfo, Escanilla Olga, Cleland Thomas A., Linster Christine (2010). Olfactory bulb habituation to odor stimuli. *Behav Neurosci*, 124(4), 490–499

Delank KW (2008). Aerodynamik im Bereich des Riechorgans. In: Stoll W (ed.) Klinik der menschlichen Sinne, Springer Vienna 51–58.

Diego, M. A., Jones, N. A., Field, T., Hernandez-Reif, M., et al. (1998). Aromatherapy positively affects mood, EEG patterns of alertness and math computations. *Int J Neursci*, 96, 217–222.

Hanns Hatt (2008) Das Maiglöckchen-Phänomen Piper Verlag: München, pg. 172

Keyhani K, Scherer PW, Mozell MM. Numerical simulation of airflow in the human nasal cavity. J Biomech Eng 1995;117: 429–441

McCaffrey R, Thomas D, Kinzelman A (2009) The Effects of Lavender and Rosemary Essential Oils on Test-Taking Anxiety Among Graduate Nursing Students *Holistic Nurs Prac* 23(2): 88-93

Moss, M., Cook, J., Wesnes, K., & Duckett, P. (2005). Aromas of rosemary and lavender essential oils differentially affect cognition and mood in healthy adults. *Int J Neurosci*, 113, 15–38.

Moss, M., Hewitt, S., & Wesnes, K. (2008). Modulation of cognitive performance and mood by aromas of peppermint and ylang-ylang. *Int J Neurosci*, 118, 59–77.

Moss M, Oliver L (2012 Plasma 1,8 cineole correlates with cognitive performance following exposure to rosemary essential oil aroma. *Ther Adv Psychopharma*, 2(3): 103–122

Olofsson JK. (2014). Time to smell: a cascade model of human olfactory perception based on response-time (RT) measurement. Front Psych, 5: 33.

Raudenbush B, Grayhem R, Sears T, Wilson I (2009). Effects of peppermint and cinnamon odor administration on simulated driving alertness, mood and workload. *N Am J Psychol*. 11:245–256.

Schneider R (2016 a), There is something in the air: Testing the efficacy of a new olfactory stress relief method (AromaStick®). *Stress Health* 32(4): 411–426

Schneider R (2016 b) Direct Application of Specially Formulated Scent Compositions (AromaStick®) Prolongs Attention and Enhances Visual Scanning Speed. *Appl Cognitive Psych* 30 (4): 650–654

Schneider R. (2018) A Breath of Fresh Air: Arterial Blood Oxygen Saturation Significantly Increased Upon the Use of an Essential Oil Inhaler (AromaStick). Results from a Prospective, Controlled, Experimental Study Involving Healthy Individuals, *Curr Res Med Rev*, 14:1–8