

Chemical Properties

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Essential Oils

Every Essential Oil contains different chemical properties that are effective in treating an array of symptoms. Some of these include:

Sesquiterpenes: These sesquiterpenes consist of 15 carbon atoms and have complex pharmacological actions and here we can look at chamazulene, which is found in German chamomile. It has anti-inflammatory and anti-allergy properties. Another sesquiterpene often found in chamomile and rose, as well as other floral oils is farnesene. History highlight of terpene research. The 1910 Nobel prize winner for Chemistry was Professor Otto Wallach for his work on terpenes which influenced the essential oil industry. [Click here to read more.](#)

Phenols: The phenols found in essential oils normally have a carbon side chain and here we can look at compounds such as thymol, eugenol and carvacrol. These components have great antiseptic, anti-bacterial and disinfectant qualities and also have greatly stimulating therapeutic properties. Due to the nature of phenols, essential oils that are high in them should be used in low concentrations and for short periods of time, since they can lead to toxicity if used over long periods of time, as the liver will be required to work harder to excrete them. Phenols are also classified as skin and mucus membrane irritants and although they have great antiseptic qualities, like cinnamon and clove oil, they can cause severe skin reactions.

Aldehydes: These aldehydes have anti-fungal, anti-inflammatory, disinfectant, sedative yet uplifting therapeutic qualities and are the component that imparts the citrus-like fragrance in melissa, lemongrass and citronella. These properties are best used in aromatherapy when the essential oil is used in low dilutions - around 1%. Should oils high in this component be used, it could cause skin irritation and sensitivity as for instance lemongrass oil. Aldehydes are also unstable and will easily oxidize in the presence of oxygen and even low heat. These are just some of the Chemical components that are in essential oils. When using oils make sure to do the research on the company that you are purchasing them through. Only 100% pure oils truly contain these chemical compounds. In the United States the regulations on oils is very weak. They only have to have 5-10% of the actual oil in the bottle for it to be considered pure. Essential Oils work differently from any other natural substance.

Their unique features are that they: Pass easily through our skin and cells membranes. Diffuse through the entire body within half an hour. Go directly to the brain through the olfactory bulb. Affect our feelings and thoughts because smell is our most emotional sense. Perform multiple functions because of their structural complexity. This is why one essential oil can do so many different things for you all at once--physically, emotionally, and mentally--with just a few drops in the air or on your skin.

Here's a picture of how the aroma of essential oils affects us: The olfactory bulb carries molecules and impulses into the brain area where our emotional memory is stored. Scent stimulates nerves to fire in the emotional center of the brain, but it also stimulates the master gland to release hormones. Hormones affect the fight/flight response, as well as digestion and heart rate. In this way, essential oils can affect us in many ways all at once, just through their fragrance. But essential oils also have a complex chemical structure, designed and produced by nature, which makes the use of essential oils uniquely economical! For example, when lavender oil is applied to a wound, over sore muscles, a broken bone, or a burn, it can support the body's natural self-healing processes in all those areas. Or it might stimulate the immune system or balance blood pressure, or relieve a tension headache, or help you go to sleep.

And finally, essential oils can affect us just through their subtle energy. They have a presence that touches us deeply, and can change our feelings and our thoughts in an instant. This you have to experience to believe!