Clary sage oil calms the mind, promotes relaxation and has a mild euphoric effect. It is highly recommended for nervous and emotional tension, anxiety, emotional shock of any kind, panic and depression with anxiety or agitation. The sweet scent fosters emotional stability, while its green scent provides a calming effect.\(^1\)

**Synonyms**
Clary, muscatel sage

**Family**
Lamiaceae (Labiatae)

**Botany and origins**
Clary sage is a biennial or perennial herb, growing 30 to 120 cm high, with greyish, velvety, heart-shaped leaves and numerous pale-blue, violet-pink or white flowers.\(^2\) It is cultivated in central Europe, Russia, England, Morocco and the USA.\(^3\)

**Method of extraction**
Clary sage oil is steam-distilled from the flowering tops and foliage of *Salvia sclarea*.

**Characteristics**
Clary sage oil is a colourless to pale-yellow or pale-olive coloured liquid with a fresh, sweet fruity, floral and herbaceous odour. Some perfumers describe it as tobacco-like, while others as balsamic or tea-like.\(^3\)

Arctander states that the aroma of clary sage has something in common with cistus and Moroccan chamomile oil.\(^3\)

**Chemical composition**
The chemical composition of French clary sage essential oil was reported as follows:
- linalool (10-20%), linalyl acetate (60-70%), caryophyllene (1.5-2.5%), α-terpineol (0.5-2.5%), geraniol (trace-1.5%), neryl acetate (0.3-1.0%), sclareol (0.5-2.0%), germacrene D (3.0-5.0%).\(^4\)

Clary sage oil is rich in esters, which are known for their antispasmodic and sedative properties.

**Adulteration**
Arctander explains that because clary sage oil is relatively expensive and since the main constituents found in the oil are linalool and linalyl acetate it is frequently adulterated by the addition of these constituents that may be synthetic or of natural source. The addition of these constituents may not be detected by the physico-chemical analysis of the oil. However, it can be detected by olfactory analysis.\(^3\)

**History**
The English name clary is derived from the Latin word *sclarea*, a word derived from clarus meaning ‘clear’. The name clary was gradually modified to clear eye, possibly because the herb was once used for clearing mucus from the eyes.\(^5\)

Culpeper suggested that a compress of the mucilage made from the seeds would reduce tumours or swellings.\(^2\)

Originally grown in southern Europe, it was planted in German vineyards. It was also used as a substitute for hops in brewing beer.\(^4\)

The flowering tops and leaves have been used to treat catarrh and as an antiseptic and emmenagogue. The herb is also used as a stomachic in digestive disorders.\(^6\)
Food, perfumery and flavouring
Clary sage oil is used as a fragrance component in perfumes. In flavouring, the coriander-like note of clary sage oil is used in liqueurs, wine essences and grape essences. It is also used as a modifier in spice compounds.

Pharmacology and clinical studies
Many pharmacological studies involving clary sage essential oil have been published. A systemic review of these studies will not be attempted. Rather, I have chosen a selection of studies that support the traditional and clinical uses.

Anticonvulsive activity
Clary sage oil has been reported to show anticonvulsive activity in animals.

Antidepressant activity
The antidepressant effects of range of essential oils were investigated using a forced swim test in rats. Rats were treated by intraperitoneal injection or inhalation. Clary sage oil had the strongest anti-stressor effect in the forced swimming test. The researchers found that the antidepressant activity of clary sage was closely associated with modulation of the DAnergic (dopamine) pathway.

After inhalation of clary sage oil, 5-hydroxytryptamine (serotonin) plasma levels significantly increased and cortisol plasma levels decreased in a study on 22 menopausal women. The change rate of cortisol was greater in the depression group compared with the normal group. The researchers concluded that clary sage does have antidepressant-like effect.

Antifungal activity
An in vitro study confirmed that clary sage oil had potent antifungal activity.

Anti-inflammatory activity
Balacs reports a clinical trial by an Italian group who has been researching the anti-inflammatory and peripheral analgesic effects of clary sage oil. In rats, clary sage oil showed a significant anti-inflammatory effect and mild analgesic action after subcutaneous injection at 259 mg/kg. The anti-inflammatory response was more marked in carrageen-induced oedema than in histamine-induced inflammation. Balacs suggests that clary sage’s activity is mediated via modulation of prostaglandin synthesis rather than via histamine.

Antimicrobial activity
An in vitro study found that clary sage oil was more effective in inhibiting methicillin-resistant \textit{Staphylococcus aureus} (MRSA) and methicillin-sensitive \textit{S. aureus} (MSSA) growth than vancomycin. The results of an in vitro test confirmed that clary sage essential oil had antimicrobial activity against \textit{S. aureus} strains isolated from patients with wound infections. It was concluded that clary sage may be applied to treat wounds and skin infections.

Antinociceptive activity
Capsicum-induced nociceptive response was significantly reduced by the intraplantar injection of clary sage oil in a study involving mice. The researchers found that linalool was likely to be the compound responsible for the antinociceptive effect of clary sage.

Cholinergetic activity
A study investigated the acetylcholinesterase (AChE) inhibition of a range of essential oils. Alzheimer’s disease is characterised by the loss of activity of the neurotransmitter acetylcholine in the cerebral cortex. It was demonstrated that clary sage essential oil gave 20.8% inhibition. It was concluded that the inhibition of AChE is more effective when synaptic acetylcholine levels are low, which is the case in Alzheimer’s disease.

Dysmenorrhea
A randomised placebo-controlled trial investigated the effects of aromatherapy on menstrual cramps and symptoms of dysmenorrhoea. A blend of clary sage, \textit{Rosa centifolia} and \textit{Lavandula officinalis} in almond oil was applied topically by massage to the abdomen. Menstrual cramps were significantly lowered in the aromatherapy group. It was suggested that aromatherapy can be offered as part of nursing care to women experiencing menstrual cramps or dysmenorrhoea.

A study compared the effect of aromatherapy massage and acetaminophen on menstrual pain in Korean high school girls. The abdomen was massaged once using a blend of clary sage, marjoram, cinnamon, ginger and geranium in a base of almond oil. The level of menstrual pain was assessed using a visual analogue scale at baseline and 24 hours later. The reduction of menstrual pain was significantly higher in the aromatherapy group than in the acetaminophen group. However, the study could not verify whether the benefits were from the aromatherapy, the massage or both.

A randomised, double-blind clinical trial using a blend of lavender, clary sage and marjoram used in a 2:1:1 ratio and diluted into an unscented cream at 3% assessed the effectiveness of the blend on menstrual cramps for outpatients with primary dysmenorrhoea.
study found that the duration of pain was significantly reduced from 2.4 to 1.8 days after the aromatherapy intervention. The study suggests that aromatherapy massage provides relief for patients with primary dysmenorrhoea.\textsuperscript{17}

**Labour**
A clinical trial involving the use of essential oils during labour found clary sage oil was beneficial for its analgesic effects, relaxing effects and its ability to accelerate labour.\textsuperscript{18}

**Stress reduction activity**
A double-blind, randomised, controlled trial conducted on 34 women with urinary incontinence investigated the effects of inhalation of clary sage or lavender oil on the autonomic nervous system. The results suggest that lavender oil may not be appropriate in lowering stress during urodynamic examinations, whereas clary sage may be potentially useful in reducing stress caused by urodynamic examination in those suffering with incontinence.\textsuperscript{19}

Clary sage oil may be effective in the prevention and treatment of stress-induced cardiovascular disease. This was based on a study in which clary sage oil intraperitoneally injected into rats subjected to immobilisation stress contributed to their recovery from endothelial dysfunction by increasing NO production and eNOS level as well as decreasing oxidative stress.\textsuperscript{20}

**Properties**
Antibacterial, anticonvulsive, antidepressant, antifungal, antispasmodic, carminative, deodorant, digestive, emmenagogue, hypotensive, nerve, sedative, tonic, uterine\textsuperscript{21,22}

**Aromatherapy Uses**

**Nervous system**
Clary sage oil is well known for its euphoric action.\textsuperscript{21} It is beneficial for treating anxiety, stress, nervous tension and depression.\textsuperscript{22,26,27,28}

Clary sage is well known for its ability to balance. It is strengthening yet relaxing and regarded as a general tonic for mental and nervous fatigue.\textsuperscript{21}

Holmes explains that clary sage oil is one of the most important remedies for the nervous system. It can restore a weak, debilitated nervous system. Clary sage is recommended for chronic atonic conditions with fatigue, insomnia, stress; neurasthenia with fatigue, burnout, exhaustion; and chronic adrenal fatigue.\textsuperscript{1}

**Psychological**
Holmes states that clary sage oil calms the mind, promotes relaxation and has a mild euphoric effect. He recommends it for nervous and emotional tension, anxiety, emotional shock of any kind, panic and depression with anxiety or agitation. The sweet scent fosters emotional stability, while its green scent provides a calming effect.\textsuperscript{1}

**Reproductive system**
Clary sage is one of the most important essential oils as a women’s remedy. All three phases of a woman’s life stand to benefit from clary sage – the menstrual cycle, childbirth and menopause.\textsuperscript{29}

Clary sage is renowned for the relief it brings to menstrual cramps because of its spasmolytic and analgesic action on the womb. Clary sage is also a uterine stimulant and an emmenagogue that promotes menstruation when delayed, scanty or completely absent.\textsuperscript{22,26,27,29}

Holmes states that clary sage is a very important oil for treating PMS. Like sweet fennel, it is specifically recommended for PMS and dysmenorrhoea that is due to oestrogen deficiency. Conversely, it is beneficial in conditions of oestrogen accumulation which is often associated with a more ‘aggressive type’ of PMS syndrome.\textsuperscript{1}

Holmes suggests that clary sage’s oestrogenic action on the system results from pituitary-gonadal stimulation. It is very likely that this oil exerts a regulating action on the pituitary gland. Clary sage is recommended for managing menopause.\textsuperscript{29}

In childbirth, clary sage’s relaxant effect can help the mother release some tension and anxiety usually present in pre-labour and labour, right up to the transition phase. It is suggested that clary sage takes the edge off the physical and emotional intensity involved in the work of riding the contraction waves.\textsuperscript{29}

**Respiratory system**
Clary sage oil is recommended for treating asthma as it relaxes spasms in the bronchial tube and helps reduce anxiety and emotional tension often associated with asthma sufferers.\textsuperscript{21,22,28}

**Skin care**
Clary sage oil is suggested for preventing excessive sweating. It is recommended for oily skin, greasy hair and dandruff as it reduces excessive sebum production.\textsuperscript{21,22}

**Energetics**
According to Traditional Chinese Medicine, clary sage oil is reputed to strengthen Qi that is depleted and it relaxes and improves circulation of Qi. This means that it is both a general tonic and an excellent antispasmodic.\textsuperscript{29}
According to the principles of the Five Elements, clary sage oil is associated with the Metal Element. Mojay explains that clary sage has a pronounced effect on the Lungs and Lung Qi. Clary sage oil acts on the bodily soul known as the Po. When the Po is disturbed, we are unable to ‘see’ clearly in the here and now. We feel distracted from our spirit and intuitive insight. Clary sage oil helps us restore lucidity to our intuition allowing inspiration to flow.28

Holmes states that clary sage has an affinity with Fire and Wood Elements. It nourishes the Blood and Yin, helps the Yang energy to descend and calms the Shen. When the Shen is agitated and the Yin Qi is deficient, we are likely to suffer from restlessness, insomnia, night sweats and headaches. He recommends blending clary sage with vetiver, geranium, and patchouli for this purpose.1

**Personality**

Clary sage personalities have the ability to probe deeply into the psyche of others. They appear pensive at times. They are gentle, melancholic and thoughtful. According to Worwood, clary sage personalities will not rest until they are sure a job is done correctly, using their psyche as well as their head. She explains that they are so adaptable, can tackle almost any job and generally prefer creative occupations.30

Clary sage personalities are described as very warm and friendly and enjoy people with all their idiosyncrasies. They are never judgmental and have the ability to be comforting in times of need, especially during times of grief.30

Clary sage brings long-lasting inner tranquillity, and, thanks to its warmth and liveliness, it helps dispel melancholy. Fischer-Rizzi compares clary sage to a colourful clown or comedian who cheers and entertains with a sort of dance. Clary sage has been particularly recognised as useful for people involved in creative work. It opens the path to the unknown, unusual, creative and intuitive.21

**According to Myers-Briggs**

personality types, the clary sage personality is likely to be an INFP. INFPs are gentle, calm, easy going and affirming. Integrity and commitment to what they believe in is essential. They like time alone for their many interests. They like learning and researching new things and interests. They are highly reflective, especially in understanding the mysteries and meaning of life. They have little need to impose their values on others. They prefer to gently influence and inspire. They value authenticity and depth in their relationships.

**Subtle**

Mojay suggests that clary sage oil is able to uplift one’s spirit without disconnecting one from reality. The earthy quality of its herbaceous, musky sweetness reflects its ability to both steady and calm the mind, while its gentle pungency enlivens the senses and restores clarity.28

Holmes states that clary sage allows us to draw on our deep emotional and energetic core. In doing so, it can have a gentle effect that will help break down and remove any protective barriers we may use when relating to others.23

Fischer-Rizzi states that clary sage feeds the soul and helps us get through tough times. She recommends clary sage when the pressure and stress are from external factors.31

Keim Loughran & Bull state that clary sage strengthens the ability to dream and assists in the development of the intuitive mind, helping us access hidden truths and insights about others, ourselves and our life experiences. They explain that dreams can be a source of great teachings, offering an avenue to heal and grow, and even to resolve our problems.32

Davis also suggests that clary sage helps to bring us more closely in touch with the dream world. It is reputed to encourage vivid dreams, or it may be that it encourages dream recall.33

Zeck explains that clary sage can be used whenever we feel stagnant and unable to have a clear understanding of what is happening in our life. She explains that it helps give us clarity and understanding of our dreams which in turn heightens our natural intuition.34

Worwood explains that clary sage encourages us to be satisfied with our achievements and it assists us in realising that most of our problems exist in the imagination, and that issues which affect us will be resolved eventually.35

**Blending**

**Aromatherapy**

For dysmenorrhea and PMS consider blending clary sage oil with essential oils such as Roman chamomile, sweet fennel, geranium, lavender, sweet marjoram or rose absolute or otto.

For anxiety, nervous tension and stress-related conditions, consider blending clary sage oil with essential oils such as bergamot, Virginian or Atlas cedarwood, fragonia, geranium, lavender, neroli, sweet orange, patchouli, petitgrain, sandalwood or ylang ylang.
To alleviate depression, consider blending clary sage oil with essential oils such as bergamot, geranium, neroli, sweet orange, jasmine absolute, rose absolute, sandalwood or ylang ylang.

**Perfumery**

Arctander states that clary sage oil is commonly used in perfumery. It is used as a modifier for essential oils such as bergamot and lavender, and often blended with cistus and frankincense. It is commonly used in chypre, fougère, oriental and tabac-type fragrances. It gives classic style cologne perfumes a unique tenacity and acts as a fragrant fixative. It also blends beautifully with coriander seed, geranium, lavender, sandalwood, clove or cedarwood.3

**Mode of administration**

**Bath**

Full body bath, foot bath

**Topical**

Compress, massage, ointment, skin care

**Inhalation**

Direct inhalation, diffuser, oil vaporiser

**Safety Profile**

Clary sage oil has been reported to be non-toxic, non-irritant and non-sensitising.22 The oil is contraindicated during pregnancy21,22 However, Tisserand & Young state that there are no known contraindications.25 Just because clary sage is labelled as an emmenagogue does not imply that the oil is an abortifacient in the amounts used in aromatherapy, and as such, it should present no danger in pregnancy.36 Lis-Balchin also states that clary sage oil is often quoted in aromatherapy literature as being oestrogenic, however, no clear scientific evidence has been forthcoming.23
References

2. Le Strange R. A history of herbal plants. Angus and Robertson, United Kingdom, 1977.