

Mogra absolute

By Salvatore Battaglia



BOTANICAL NAME

Jasminum sambac (L.) Sol.

COMMON NAMES

Arabian Jasmine, Asian Jasmine, Indian Jasmine, Sacred Jasmine, sambac Jasmine, Tuscan Jasmine.²

FAMILY

Oleaceae

Fischer-Rizzi gives us the best description of jasmine absolute when she states that no other essential oil is capable of changing our mood so intensely and that it offers little choice other than optimism. She explains that the fragrance penetrates the deepest layers of our soul, opening the doors to our emotions.¹

BOTANY AND ORIGINS

The species probably originates from India, Bengal to Sri Lanka and Myanmar, Yunnan and adjacent mountains of Guizhou and Guanxi in China.²

The *Jasminum* species are evergreen, deciduous shrubs or shrubby climbers with white, pink or yellow very fragrant flowers. Jasmine is native to the Indian and South East Asian region.³

There are more than 200 species of jasmine cultivated in the subtropics worldwide. The three most important commercially cultivated species used for essential oil production are:

J. auriculatum

J. grandiflorum

J. sambac.³

J. auriculatum is native to southern India and has adapted to regions with high temperatures and above average rainfall.³

J. grandiflorum is native to northern Iran, Afghanistan and Kashmir, and has been introduced and is currently commercially cultivated in many countries, principally around the Mediterranean. It has adapted to a milder climate.³

J. sambac is native to southern India and has a long history of cultivation in India. It is commonly referred to as *mogra*.³

METHOD OF EXTRACTION

Jasmine absolute is produced by alcohol extraction of jasmine concrete, which is prepared by extraction with hydrocarbon solvents or by enfleurage. Today, most jasmine absolute is commonly obtained by solvent extraction via the concrete from the flowers of *J. grandiflorum* cultivated in Egypt, Italy, Morocco and India, and of *J. sambac* from China and India.³

Jasminum sambac is a more delicate flower that opens only at night and is picked early in the morning when the tiny flower petals are tightly closed. The harvested buds are taken to the flower auction markets and stored in a cool, dark place. Between 6.00pm and 8.00pm as the temperature cools, the flower petals open, releasing their amazing scent which is characterised by a rich, indole note.⁴

The flowers open in the early morning and there is a rapid and significant loss of essential oil once the buds have opened. For example, one of the constituents, indole, dropped by 0.6-0.8 mg/100 g of flowers in the first hours after the buds open.³

Flowers are usually picked by hand as a suitable method for mechanical harvesting has not been commercially developed. Flowers must be processed without delay. Approximately 1,000 kg of jasmine flowers will yield 2.5 – 3.5 kg of concrete, and half this amount as an absolute.³

CHARACTERISTICS

Jasmine grandiflorum absolute is a dark orange (on aging, reddish-brown), somewhat viscous liquid, and it possesses an intensely floral, warm, rich and highly diffusive odour with a peculiar waxy-herbaceous, oily-fruity and tea-like undertone.⁵

On the other hand, Jasmine sambac has a delicate sweet, floral, rich aroma, with a greener note compared to *J. grandiflorum*.⁴

I am fascinated by the emotive response to the rich, floral scent of jasmine. It is often a love or hate reaction. Rodrigo Flores-Roux provides us with a delightful explanation:

*The scent of jasmine is a highly personal one, mostly because it touches people in uncannily different ways. Jasmine makes emotions, perceptions and thought react differently. Thus, it conjures deeply private images, evokes the most secret memories and sparks the wildest impulses that otherwise could be prudishly held back.*⁴

Rodrigo Flores-Roux explains that the scent of jasmine is always rich and opulent and extremely desirable.⁴

CHEMICAL COMPOSITION

While the main volatile component of jasmine is benzyl acetate, minor constituents such as indole and *cis*-jasmone significantly contribute to the typical jasmine fragrance.

The chemical composition of *Jasminum officinalis* absolute and jasmine sambac absolute was reported as follows:

Constituent	Jasmine sambac	Egyptian <i>Jasminum officinalis</i>
benzyl alcohol	6.13%	3.51%
methyl benzoate	0.41%	-
linalool	6.06%	12.39%
benzyl acetate	9.56%	25.18%
indole	6.47%	1.51%
eugenol	-	2.44%
methyl anthranilate	10.19%	-
trans-jasmone	0.07%	1.84%
a-farnesene	13.72%	0.28%
cis-3-hexenyl benzoate	5.29%	-
4-a-hydroxygermacral (10),5-diene	5.25%	-
benzyl benzoate	0.67%	32.74%
phytol		11.98%
methyl linolenate	3.23%	0.91%
geranyl linaloate	2.23%	0.29%

Comparative percentage composition of the major volatile components of Jasmine and sambac absolute^{6,7}

It would appear that the indole content is dependent on the stage of the flower bud being open. Closed flower buds yield an absolute with very little indole, while open flower buds yield a much higher indole content. Indole is known for its animalic character and is most likely responsible for the more sensual qualities of the oil.

ADULTERATION

Because of jasmine absolute's high price and very low yield during extraction, adulteration is very common. It is commonly adulterated with synthetic components such as indole, cinnamic aldehyde, *cis*-jasmone, farnesene, benzyl benzoate, benzyl acetate and fractions of ylang ylang.^{5,8}

HISTORY

Jasmine's fragrant flowers have been used since antiquity for personal adornment and in religious ceremonies, strewn at festivals and in bath water in practically all countries in which the plant grows.³

Weiss states that it is the combination of a very powerful, rich scent and a white flower that has led to its aesthetic appeal.³

The word 'jasmine' is derived from the Arabic word meaning *Yasmin* or 'gift from God'. In India, jasmine sambac is commonly known as 'Queen of the Night' because the scent is stronger during the hours of darkness. The importance of the jasmine flower has been symbolically used throughout the centuries.

In the Philippines, *J. sambac* is traditionally called *sampaguita* meaning 'I promise you' and its flower is a symbol of fidelity, purity and eternal love.⁹

In China, the jasmine flower symbolises the sweetness of women, while in India it symbolises divine hope. In the 15th century jasmine was cultivated for its fragrant flowers in the gardens of the emperors of China, Afghanistan, Iran and Nepal. It was not until around 1600 when jasmine was brought to Spain by the Moors that it first made its appearance in Europe.³

While jasmine species were mentioned in ancient Indian ayurvedic texts, *J. sambac*, also known as Tuscan jasmine, was introduced into India by the Duke of Tuscany in about 1691. Jasmine reached China along the Silk Road and the use of its flowers to flavour tea, *mo-li-hau-cha*, originated there. Such teas now use *J. paniculatum* flowers.³

TRADITIONAL MEDICINE

Weiss explains that jasmine oil has long been valued for its medicinal properties. It was believed to stimulate the reproductive system not only as an aphrodisiac, but also as a muscle relaxant.³

All parts of the plant are used in traditional medicine in Asia. It is reputed to have many medicinal properties such as thermogenic, aphrodisiac, antiseptic, emollient, anthelmintic and tonic, and is commonly used for stomatitis, ulcers and skin diseases. Jasmine sambac has a long history of use for male and female reproductive conditions. It is reputed to relieve postnatal depression, and infertility and is considered calmative.²

As a medicinal plant, jasmine has traditionally been considered an aphrodisiac and relaxant.⁸

Jasmine species were mentioned in ancient Indian Ayurvedic literature. The oil was traditionally used in treatment of various conditions such as arthritis, hepatitis, conjunctivitis, gastritis and diarrhoea.⁹

The flowers of jasmine sambac are bitter, pungent and cooling. In Ayurveda, the flowers are used to relieve itching, reduce

fever, stop vomiting and are useful for treatment of diarrhoea, abdominal pain, conjunctivitis, asthma, wound healing, toothache and dermatitis.¹⁰

PHARMACOLOGY AND CLINICAL STUDIES

Many pharmacological studies involving jasmine absolute 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.

Please note many of the studies cited for *Jasminum sambac* are for alcoholic extracts of the flowers. While these alcoholic extracts contain volatile oils, they also contain other botanical actives such as glycosides, tannins, phenolic compounds, flavonoids, saponins and steroids.¹⁰

Antimicrobial activity

A limited number of studies have investigated jasmine absolute's antimicrobial activity. An in-vitro study confirmed that *J. sambac* oil showed good, antifungal activity against *Aspergillus flavus*, *Trichophyton mentagrophytes*, *T. tonsurans*, *T. verrucosum*, *Epidermatophyton floccosum* and *Microsporum nanum*. The antimicrobial activity of jasmine absolute is often associated with the linalool content.⁹

Al-Snafi cites many studies that have confirmed the antimicrobial activity of the essential oil and ethanol extract of *Jasminum sambac* flowers. The ethanol extracts displayed the highest antimicrobial activity, while the petroleum ether extract displayed moderate antimicrobial activity against a range of microbial strains.¹⁰

Anti-inflammatory and analgesic activity

Animal studies have confirmed that the methanol extract of *Jasminum sambac* flowers displayed anti-inflammatory and analgesic activities.¹⁰

Childbirth

A six-month trial was conducted involving 500 women at a maternity hospital using essential oils such as chamomile, clary sage, eucalyptus, jasmine, frankincense, lavender, lemon, mandarin, peppermint and rose. The oils were administered by inhalation, bath and massage. A high level of overall satisfaction by mothers and midwives was noted on the use of essential oils during labour.¹¹

Neurophysiological activity

The effect on the pentobarbital sleep time by olfactory stimulation using various odorants was investigated in mice. The study found that jasmine shortened the sleep time. The researchers concluded that olfactory stimulation associated with odour inhalation influences pentobarbital sleep time.¹²

A study clearly identified that jasmine has an excitatory effect and sedative effects for lavender in a human vigilance test.¹³

During the vigilance test taken by 24 subjects, lavender significantly increased reaction time, whereas jasmine significantly decreased reaction time compared to the control group in which no essential oil was inhaled. The results confirmed that lavender had a sedative effect, while jasmine had an excitatory effect on behaviour.¹⁴

Jasmine oil shortened the pentobarbital-induced sleeping time of mice to 77% of the control group. The researchers identified *cis*- and *trans*-phytol as the components responsible for this effect.¹⁵

A study investigating the effect of aromatherapy massage with jasmine oil on humans found that jasmine oil caused significant increases in breathing rate, blood oxygen saturation and systolic and diastolic blood pressure, which indicated an increase of autonomic arousal. At an emotional level, subjects in the jasmine group rated themselves as more alert and less relaxed than subjects in the control group. The author notes that this provides evidence for the use of jasmine for the relief of depression and uplifting mood in humans.¹⁶

A single-blind clinical trial found that ten-pin bowling, in the presence of the odour of jasmine, improved scores by 26.7%. The authors stated that the possible mechanisms of action include mood regulation, enhanced alertness and concentration, anxiolysis, increased self-confidence and improved hand-eye coordination.¹⁷

Another study was designed to determine if certain odours could increase human's ratings and tolerance of pain. The results indicated that peppermint and jasmine odour significantly decreased ratings of pain over time and increased overall pain tolerance. The participants reported reduced mental, physical and temporal workload requirement, decreased effort and frustration, and increased performance and vigor.¹⁸

Suppression of lactation

This is an old study, but it confirms the traditional practice of using jasmine flowers applied to the breasts to suppress lactation. The study compared the ability of jasmine sambac flowers applied to the breasts to suppress puerperal lactation compared to bromocriptine. The results of the study confirmed that jasmine flowers were just as effective as bromocriptine, and could be used as an alternative in situations where cost and non-availability restrict the use of bromocriptine.¹⁹

PROPERTIES

Antidepressant, antiseptic, antispasmodic, aphrodisiac, parturient, sedative, uterine.^{20,21,22}

AROMATHERAPY USES

While there are many similarities between *Jasminum grandiflorum* and *Jasminum sambac* absolute, there are also some energetic differences between the two oils, which we will soon discuss.

In this monograph, the term 'jasmine' refers to either *J. grandiflorum* or *J. sambac*. However, when I refer to *Jasminum sambac*, I will simply state jasmine sambac or mogra.

Psychological

The therapeutic value of jasmine absolute is inseparable from the exquisite, comforting sweetness of its aroma, and the effect it has on the mind and emotions. Jasmine is considered one of the most effective essential oils for nervous anxiety, restlessness and depression.²³

The fragrance of jasmine sambac diminishes fear and promotes self-confidence.

Mojay states that jasmine is ideal whenever fear and vulnerability, or anxiety and depression, cut us off from our ability to share physical pleasure and affection. Jasmine can reawaken our passion and reunite it with love, providing us with support and reassurance.²³

Holmes recommends jasmine sambac for promoting emotional stability and renewal. This is ideal for conditions associated with emotional irritability, distressed feeling such as pessimism, cynicism, jealousy and resentment. He explains that it calms the mind and promotes cognitive flexibility. This could be ideal for conditions such as nervous tension, restlessness, agitated depression with anger and worry.

The oil also promotes euphoria and helps to resolve shock and trauma.²⁴

Jasmine absolute has been described as a powerful antidepressant of a stimulating nature. It is recommended when depression has given rise to lethargy.²⁵

Childbirth

Jasmine absolute is one of the most useful oils to use during childbirth. If it is used as a massage oil on the abdomen and lower back in the early stages of labour, it will relieve the pain and strengthen the contractions. It helps with the expulsion of the placenta after delivery and aids postnatal recovery.^{20,25}

It can be used to relieve spasms of the uterus and delayed and painful menstruation.^{1,20}

Skin care

Jasmine sambac is particularly useful in skin care and is used to treat dry and irritated skin.^{20,24}

ENERGETICS

Holmes describes *Jasminum grandiflorum* as having neutral to warm, energetic qualities while *Jasminum sambac* absolute has neutral to cool energetic qualities. Both jasmine absolutes are assigned to the Wood and Fire Element and help to harmonise and strengthen the Heart and the *Shen*.²⁴

The *Shen* is a traditional Chinese medicine term used to describe the spiritual aspect of the Fire Element. It is responsible for our passion for life, and it provides us with emotional stability and harmony. Heat aggravates the Fire element and this in turn agitates *Shen*, which is often associated with anxiety, irritability, mood swings, restlessness and erratic, emotional behaviour. The cooling nature of Jasmine sambac indicates it would be better suited for balancing the Fire Element whenever there is excess heat. On the other hand, *Jasminum grandiflorum* is more warming and it may be more beneficial whenever the *Shen* is weak which is associated with chronic depression, anxiety, mood swings and pessimism.

Holmes explains that the intensely sweet, green notes of jasmine sambac provide it with a cooling effect at an emotional level. He suggests it is ideal for resolving intense, distressed emotions involving issues of desire, pleasure, sexuality and emotional dependency. It is able to refine intense autonomic emotional reactions connected with the ego-self into more subtle feelings connected to the inner self.²⁴

PERSONALITY

While Worwood is describing the female jasmine personality, she states the male jasmine man is equally charming, charismatic and at ease with his femininity. Jasmine is a no-holds-barred personality, the passionate seductress, gentle and charismatic, bewitching all who come into her presence. Jasmine personalities are joyful, happy people, comfortable with themselves. They can be unnerving if you are not used to them, particularly at work.²⁶

According to Myers-Briggs personality types, the jasmine personality is likely to be an ESFP. ESFP personalities are friendly, witty, charming and talkative. They value and nurture their relationships and give generously, without expecting anything in return. They are spontaneous, playful and enjoy everything they do and see. People who share their sense of fun and adventure are their favourite companions. They turn everything into a fun-filled event. They enjoy the good things in life – music, dance, food, drink and entertainment. They avoid being alone. They like working in a lively and stimulating atmosphere with friendly, energetic people. They can be good at dealing with the public. They like variety and frequent change of tasks or jobs. They are enthusiastic, high-spirited and have lots of energy.

SUBTLE

Lavabre best summarises the subtle qualities of jasmine when he says it releases inhibition, liberates imagination, develops exhilarating playfulness and has the power to transcend physical love, fully releasing both male and female sexual energy.²¹

Mojay recommends jasmine for depression that results from unconscious restraint and repression – an approach to life based on values discordant with the individual soul and its true desires.²³

Zeck recommends using jasmine when you are faced with seemingly unresolved emotional challenges and feeling fearful. She states that the exotic beauty of jasmine will dissolve those fears and provide divine inspiration.²⁷

Worwood states that jasmine softly embraces the spirit and the heart. This promotes a greater understanding of the conscious mind. She explains that jasmine's purpose is to provide us with our personal haven – this allows us to find a greater resonance with our higher self. She explains that our aspirations may not always be what is required to follow a spiritual journey. Often our dreams and wishes for others may deflect them from our spiritual journey. Jasmine helps us to understand and accept this.²⁸

According to Keim Loughran & Bull, Jasmine promotes love and sensuality. It also connects our spirituality and sexuality, and promotes creativity and artistic development.²⁹

BLENDING

Aromatherapy

To alleviate depression, consider blending jasmine absolute with essential oils such as bergamot, black pepper, coriander seed, geranium, ginger, grapefruit, lavender, sweet orange, rose absolute, sandalwood or ylang ylang.

For the relief of anxiety, stress and nervous tension, consider blending jasmine absolute with essential oils such as bergamot, coriander seed, geranium, lavender, neroli, sweet orange, patchouli, sandalwood or ylang ylang.

For the relief of PMS and dysmenorrhoea, consider blending jasmine absolute with essential oils such as Roman chamomile, clary sage, sweet fennel, geranium, lavender, sweet marjoram or ylang ylang.

Peter Holmes provides us with some wonderful synergistic combinations:²⁴

Jasmine sambac + lavender: for emotional instability, including mood swings, frustration, anger, negativity and anxiety.

Jasmine sambac + ylang ylang: for intense distressed emotions and severe agitation.

Jasmine sambac + jasmine: strong, euphoric blend for severe shame and depression.

Jasmine sambac + neroli: for acute shock, also as sedative, antidepressant for severe emotional instability with agitated depression.

Jasmine sambac + rose: for negative or distressed emotions, depression and emotional instability.

Perfumery

Arctander states that whenever a floral note is required, eight times out of ten, the perfumer will use a jasmine base. Jasmine is often blended with rose to create the heart and soul of any floral based perfume. He gives us some practical advice when he explains that the practising student perfumer is often surprised when they learn how little jasmine absolute has to be used to create a floral note.⁵

HOW TO USE

Bath

Full-body bath, foot bath

Topical

Compress, massage, ointment, skin care

Inhalation

Direct inhalation, diffuser, oil vaporiser

SAFETY

Jasmine grandiflorum absolute is non-irritating, non-sensitising and non-toxic. However, Khan & Abourashed have cited coniferyl acetate coniferyl benzoate as allergenic components of the jasmine absolute.³⁰

Tisserand & Young state it is a moderate-risk skin sensitizer and IFRA only recommends a dermal limit of 0.7% for jasmine absolute. On the other hand, Jasmine sambac absolute is considered a low-risk skin sensitiser and IFRA recommends a maximum dermal use level of 4%.³¹

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