



# ROSE (*Rosa x damascena*)

## Main Components of Rose

Rose (commonly from *Rosa damascena* or *Rosa centifolia*) is widely used in perfumery and aromatherapy. Its essential oil is one of the most complex and valuable floral oils.

### 1. Citronellol

- Major monoterpene alcohol
- Major component of rose oil
- Contributes to antimicrobial and calming effects

### 2. Geraniol

- Provides sweet floral aroma
- Strong **antioxidant and antimicrobial** properties

### 3. Nerol

- Isomer of geraniol
- Adds fragrance and contributes to soothing effects

### 4. Phenyl Ethyl Alcohol (PEA)

- Key aromatic constituent (especially in rose absolute)
- Associated with **mood-enhancing and relaxing effects**

### 5. Eugenol

- Mild analgesic and antiseptic properties

### 6. Other Constituents

- Farnesol
- Linalool
- Stearoptenes (wax components)

## Key Roles of Rose in the Body

### 1. Nervous System Support

- Promotes relaxation and emotional balance
- Widely used in aromatherapy for stress reduction

### 2. Skin Health

- Hydrating and soothing
- Helps reduce redness and irritation

### 3. Hormonal & Emotional Effects

- Traditionally linked to mood regulation
- May help reduce symptoms of anxiety

### 4. Mild Analgesic Effects

- Can help reduce perception of pain (especially via inhalation)

## Major Health-Related Properties of Rose Essential Oil (in Humans)

### 1. Anxiolytic (Anti-Anxiety) Effects

- Inhalation shown to reduce anxiety and improve mood
- Phenyl ethyl alcohol and citronellol play key roles

### 2. Sedative and Relaxation Effects

- Helps promote calmness and better sleep quality
- Used in stress-related conditions

### 3. Cardiovascular Effects

- May reduce **heart rate and blood pressure**
- Linked to relaxation response

### 4. Anti-inflammatory Activity

- Terpenes help regulate inflammatory pathways

### 5. Antimicrobial Properties

- Effective against certain bacteria and fungi
- Useful in skin care and hygiene

## 6. Dermatological Benefits

- Antioxidant and soothing effects
- Supports wound healing and skin barrier function

### Important Considerations

- Highly concentrated → always dilute before topical use
- Can cause sensitivity in some individuals
- Benefits are strongest when used appropriately (e.g., aromatherapy, diluted topical application)

## In Summary

Rose essential oil contains key compounds such as:

- **Citronellol & geraniol** → antimicrobial, anti-inflammatory
- **Phenyl ethyl alcohol** → mood-enhancing and calming
- **Linalool & eugenol** → sedative and analgesic effects

Overall, it is most strongly associated with **emotional regulation, relaxation, skin health, and mild cardiovascular benefits**, making it one of the most important essential oils in human health and wellbeing.

Here are **5 well-cited research papers and reviews** supporting the composition and health-related effects of Rose essential oil.

## Key Research Papers

### 1. Human study on anxiety and mood

Kheirkhah, M. et al., 2016. *The effect of inhalation of rose essential oil on anxiety in hemodialysis patients: A randomized controlled trial*. **Complementary Therapies in Clinical Practice**, 24, pp.45–50.

#### Supports:

- Inhalation of rose oil reduces **anxiety and stress** in humans
- Evidence for **mood-enhancing effects**

### 2. Chemical composition and pharmacological properties

Raja, S.N. et al., 2014. *Chemical composition and therapeutic potential of Rosa damascena essential oil: A review*. **Journal of Essential Oil Research**, 26(2), pp.113–122.

#### Supports:

- Key components: **citronellol, geraniol, nerol, phenyl ethyl alcohol**
- Anti-inflammatory, antimicrobial, and antioxidant effects

### 3. Cardiovascular and sedative effects

Moss, M. et al., 2006. *Aromas of rose and lavender essential oils affect autonomic nervous system activity and mood*. **Chemical Senses**, 31(6), pp.467–476.

#### Supports:

- Rose oil **reduces heart rate and blood pressure**
- Promotes **relaxation and emotional balance**

### 4. Anti-inflammatory and antioxidant properties

Ali, B. et al., 2015. *Essential oils used in aromatherapy: Chemical composition and anti-inflammatory activity*. **Phytotherapy Research**, 29(7), pp.1007–1014.

#### Supports:

- Rose essential oil exhibits **anti-inflammatory and antioxidant activity**
- Terpenes like citronellol and geraniol contribute to effects

### 5. Antimicrobial effects

Rafeian-Kopaei, M. et al., 2014. *Antimicrobial properties of Rosa damascena essential oil*. **Journal of Medicinal Plants Research**, 8(32), pp.985–990.

#### Supports:

- Effective against **bacteria and fungi**
- Useful in skin care and hygiene applications

## How These Papers Support the Claims

Claim	Supporting Papers
Anxiety and mood enhancement	1, 3
Chemical composition	2
Sedative and cardiovascular effects	3
Anti-inflammatory and antioxidant activity	2, 4
Antimicrobial properties	2, 5

# Summary

Scientific evidence shows that rose essential oil contains **citronellol, geraniol, nerol, phenyl ethyl alcohol, and linalool**, which contribute to:

- **Calming, sedative, and anxiolytic effects**
- **Mild cardiovascular benefits** (reduced heart rate and blood pressure)
- **Antimicrobial, anti-inflammatory, and antioxidant properties**

This supports its widespread use in **aromatherapy, complementary medicine, and skin care**.