



Lemongrass (*Cymbopogon flexuosus*) Essential Oil

Lemongrass essential oil is steam-distilled from the leaves and stalks of the tropical grass *Cymbopogon flexuosus* (East Indian lemongrass), native to India and widely cultivated in tropical/subtropical regions. It has a fresh, citrusy, lemon-like scent with grassy and earthy undertones. The oil is popular in aromatherapy, skincare, natural cleaning, massage, and traditional medicine. It is distinct from culinary lemongrass herb or *Cymbopogon citratus* (often used in cooking/tea).

Chemical Composition

The primary active component is **citral** (a mixture of geranial and neral), typically making up **65–85%** of the oil. Other key compounds include:

- **Geraniol** and **Geranyl acetate** — antimicrobial, antioxidant
- **Myrcene** — analgesic, anti-inflammatory
- **Limonene** — mood-enhancing, cleansing
- **Linalool** (smaller amounts) — calming

These contribute to the oil's antimicrobial, anti-inflammatory, antioxidant, and uplifting properties. Composition can vary based on origin, growing conditions, and distillation method.

Key Benefits and Uses

Benefits are supported by traditional use, lab/animal studies, and limited human research. It is **not a substitute for medical treatment**—consult a healthcare professional for therapeutic use. More high-quality human studies are needed.

Antimicrobial (Antibacterial & Antifungal) Effective against bacteria (e.g., *Staphylococcus aureus*, *E. coli*) and fungi (e.g., *Candida albicans*). It can disrupt biofilms and is useful for:

- Minor skin infections, wound cleansing, athlete's foot, nail fungus
- Oral care (gingivitis, bad breath)
- Natural preservatives, household cleaners, and surface disinfectants

Anti-inflammatory & Pain Relief Citral helps reduce inflammation and proinflammatory cytokines. May ease:

- Muscle soreness, joint stiffness, rheumatoid arthritis pain
- Headaches and tension
- Overuse strains

One small human study (2017) showed reduced arthritis pain with topical 3 mg application over 30 days.





Antioxidant Support Helps combat free radicals and oxidative stress, potentially benefiting skin (reducing wrinkles/photoaging) and overall cellular protection.

Mood, Stress & Mental Clarity Uplifting citrus aroma in aromatherapy may:

- Reduce anxiety, stress, and mental fatigue
- Improve focus, alertness, motivation, and energy
- Promote relaxation and better sleep

Insect Repellent Citral and geraniol deter mosquitoes, flies, ants, fleas, and mites. Effective in diffusers, sprays, or topical blends (up to ~98% protection in some studies when combined with carrier oils).

Skin & Hair Health Astringent, toning, and cleansing properties help with:

- Oily/blemish-prone skin, acne, enlarged pores
- Dandruff, itchy scalp, strengthened hair follicles
- Deodorizing (targets odour-causing bacteria)

Use low dilutions (0.5% for face) to avoid irritation.

Digestive & Other Support Traditionally used (often as tea) for nausea, stomach issues, and ulcers. Preclinical studies suggest gastric protection, possible blood sugar/lipid regulation, and diuretic/detox effects. **Do not ingest essential oil without professional guidance.**

Additional Household Uses

- Natural cleaner/deodorizer for rooms, laundry, shoes, carpets
- Supports respiratory comfort when diffused (blends well with eucalyptus, peppermint, tea tree)

How to Use

- **Diffusion/Aromatherapy:** 3–6 drops in a diffuser for mood, focus, or air purification.
- **Topical:** Always dilute in carrier oil (coconut, jojoba, etc.) at **1–2%** (6–12 drops per oz/30 ml) for massage or body use. Use ~0.5% for face. Patch test first. Add to lotions, shampoos, or baths (pre-dispersed).
- **Cleaning:** Add to sprays, surface cleaners, or laundry.
- **Insect Repellent:** Dilute in water/witch hazel spray or apply diluted topically.
- **Ingestion:** Not recommended for essential oil. Use lemongrass tea/herb instead under guidance.
- **Massage/Bath:** Blend with complementary oils; disperse before adding to bathwater.

Blends Well With

- **Citrus:** Lemon, lime, grapefruit, orange, bergamot
- **Floral:** Lavender, geranium, ylang ylang
- **Woody:** Cedarwood, sandalwood, cypress
- **Herbaceous/Spicy:** Basil, rosemary, peppermint, ginger, black pepper, cardamom





Safety and Precautions

Generally Recognized as Safe (GRAS) by FDA when used properly, but highly concentrated.

- **Dilute properly** — undiluted use risks irritation, rash, or sensitization.
- Patch test 24 hours before wider use.
- Avoid eyes, mucous membranes, broken/inflamed skin, and face (unless very low dilution).
- Caution with sensitive skin, children, pets, asthma, pregnancy/breastfeeding (especially oral use).
- Not phototoxic (unlike some citrus oils).
- Keep away from open flames (flammable). Store out of reach of children/pets.
- Choose pure, therapeutic-grade oil from reputable sources.

Side Effects: Possible skin irritation, dryness, or stinging. Discontinue if reaction occurs. Consult a doctor before use with medical conditions or medications.

Summary

Lemongrass essential oil is a versatile, refreshing choice for natural cleaning, aromatherapy, skincare, muscle/joint support, and insect repulsion. Its strong antimicrobial and uplifting properties make it a household staple, but use it safely and diluted. While research (especially on citral) is promising, it complements—not replaces—professional medical care.

For best results, start with low dilutions and high-quality oil.

