

# Essential Oils & The Skin

The Complete Skin Series

By Robert Tisserand



TISSERAND  
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# Dryness & oilyness

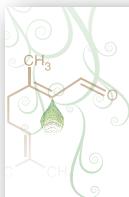


- ▶ Dry skin
- ▶ Oily skin
- ▶ Acne vulgaris
- ▶ Seborrheic dermatitis
- ▶ Alopecia

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## Dry skin



Abnormal desquamation leads to clumping of corneocytes, and a rough, white appearance. On black skin, this looks grey.

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## Emollients



**Butters**

Cocoa  
Kokum  
Mango  
Shea

Emollients smooth  
flaky skin cells



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## Moisturizing oils



Calendula CO2  
Blue Chamomile EO  
Blue chamomile CO2  
Patchouli EO  
Rose ABS  
Sandalwood EO  
Vetiver EO



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# Sebum composition

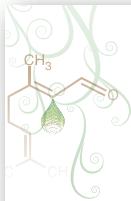
Lipid class	Range %	Mean %
Triglycerides	20-60	45
Wax esters	23-29	25
Squalene	10-14	12
Free fatty acids	5-40	10
Cholesterol & sterol esters	1-5	4
Diglycerides	1-2	2
Other	?	2

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# Squalene

Amaranth FO  
Olive FO  
Rice bran FO  
Wheat germ FO

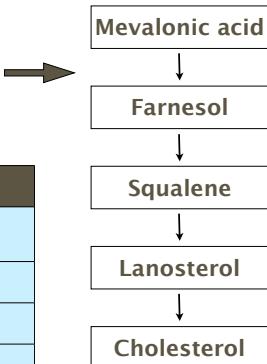


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## Cholesterol synthesis



<b>Farnesol</b>	
Sandalwood EO (W.Australia)	9%
Palmarosa EO	4%
Ambrette seed EO	4%
Rose ABS	1%

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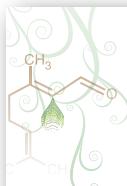
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# Dry skin lotion

Ingredient	Quantity
Lotion base	8 oz
Cedarwood deodor EO	32 drops
Palmarosa EO	25 drops
Sandalwood EO	18 drops
Copaiba EO	12 drops
Lemon EO	8 drops
Calendula CO2	3 drops
Rose ABS	2 drops
Total	100%

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## Oily skin



Over-production of sebum.  
Commonly associated with teenagers and  
with the T-zone

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## Essential oils

Limonene	
91%	Grapefruit*
90%	Orange (sweet)
89%	Tangerine
70%	Mandarin
66%	Lemon*

\* Phototoxic

Essential oils high in limonene dissolve grease and fats such as sebum



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## Anti-acne potential

Essential oil	P. acnes	S. epidermidis	Anti-inflammatory
Clove	yes	yes	yes
Grapefruit	yes	not tested	yes
Kaffir lime	yes	not tested	yes
Lavender	yes	yes	yes
Rose	yes	not tested	yes
Rosemary (a-Pinene)	yes	yes	yes
Tea tree	yes	yes	yes
Thyme (thymol)	yes	yes	yes

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## Acne vulgaris



**Grade I** Mostly open and closed comedones. A few pimples.

**Grade II** Many closed comedones with occasional pustules or papules.

**Grade III** Many open and closed comedones, papules and pustules.

**Grade IV** Cystic acne. Many deep cysts, scar formation.



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## Acne gel

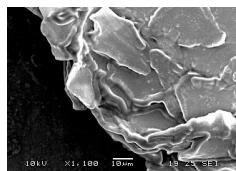
Ingredient	Percent
Aloe vera gel	88.7%
Argan FO	4%
Green tea extract	2.5%
Grapefruit EO	2%
Rosemary pinene EO	1.5%
Tea tree EO	1%
Hop CO <sub>2</sub>	0.2%
Thyme thymol EO	0.1%
Total	100%

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## Seborrheic dermatitis



A dandruff scale

Can affect both skin and scalp.

In infants, also known as cradle cap.

On the scalp with no inflammation, also known as dandruff.

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## Successful treatment

Ingredient	Percent
Calendula FO	97%
Palmarosa EO	0.75%
Geranium EO	0.6%
Spike lavender EO	0.6%
Tea tree EO	0.6%
Blue chamomile EO	0.3%
Peppermint EO	0.15%
Total	100%

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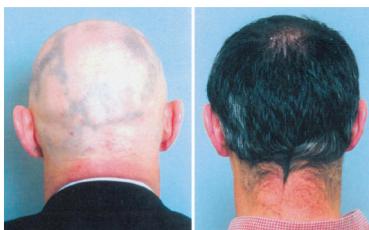
**Instructions**  
Massage into the scalp and leave overnight.

In the morning, use a neutral shampoo with 5% of the essential oil mix added.

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## Alopecia areata



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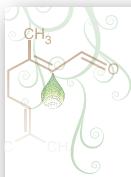


## The formulation

Essential oil	Quantity	Percent
Grapeseed oil	20 mL	86.3
Jojoba oil	3 mL	12
Lavender	3 drops	0.5
Rosemary	3 drops	0.5
Thyme	2 drops	0.35
Atlas cedarwood	2 drops	0.35
Totals	23.3 mL	100

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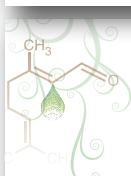
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## Summary points 1

- Corneocytes contain 'natural moisturizing factor'
  - Abnormal desquamation leads to clumping of corneocytes.
  - Dry skin has 10% or less of water.
  - It can be counteracted with occlusive fatty oils, which slow TEWL.
  - Humectants such as glycerine attract water from the dermis to the epidermis.
  - Essential oils may increase or decrease skin hydration.
  - Slow-evaporating essential oils are more likely to be helpful for dry skin.
  - Farnesol and squalene are precursors of cholesterol, an important skin lipid.

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## Summary points 2

- Oily skin is a predisposing factor for acne.
  - Green tea extract (3% in cream base) inhibits sebum production.
  - Essential oils with high limonene content dissolve fats such as sebum.
  - In acne, hair follicles become blocked, and *P. acnes* proliferates.
  - Many essential oils inhibit growth of *P. acnes*, notably thyme thymol.
  - Tea tree oil, at 5% in a gel base, had good results in a small clinical trial.
  - Dandruff is associated with over-growth of *Malassezia furfur*.
  - Tea tree inhibits this yeast, and at 5% in a shampoo was effective in a clinical trial.
  - A blend of essential oils in grapeseed oil was effective in an alopecia trial.

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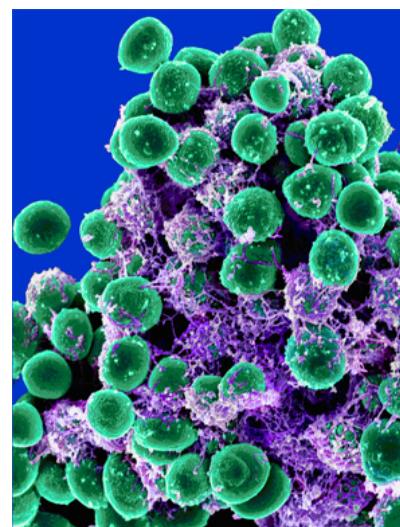
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Image credit, slide 38:



Staphylococcus epidermidis: Michael Otto PhD

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