



Phototoxic essential oils

Key Points

- Essential oils with chemical constituents known as furocoumarins can cause phototoxicity when skin applied with a phototoxic known essential oil is exposed to ultraviolet (UV) light.
- Using phototoxic essential oils on the skin requires extra precautions.
- Keep skin that was applied with a phototoxic essential oil from exposure to the sun (even on a cloudy day) or a tanning bed for at least 18 hours.
- Phototoxicity occurs at the DNA level and may not be apparent for hours to a couple days after exposure.
- Reactions can be mild with only increased pigmentation noted, or severe as third-degree burns.
- Most cold-expressed citrus essential oils are phototoxic - sweet orange is the one exception.
- Steam-distilled citrus oils are not phototoxic since there are no furocoumarins present.
- A small number of non-citrus essential oils are phototoxic.

Phototoxic citrus cold-expressed essential oils

- Bergamot (*Citrus bergamia*)
- Bitter orange (*Citrus aurantium*)
- Grapefruit (*Citrus paradisi*)
- Lemon (*Citrus limon*)
- Lime (*Citrus aurantifolia*)
- Mandarin (*Citrus reticulata*)

Phototoxic non-citrus essential oils

- Angelica root (*Angelica archangelica*)
- Cumin (*Cuminum cyminum*)
- Fig leaf absolute (*Ficus carica*)
- Lemon verbena (*Lippia citrodora/Aloysia triphylla*)
- Opopanax (*Commiphora guidottii /Commiphora erythraea*)
- Rue (*Ruta graveolens*)
- Tagetes oil or absolute (*Tagetes minuta*)