

Essential Oils for Common Primary Care Concerns

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Disclosures

- ▶ I have a financial relationship with an essential oil company

Objectives

- ▶ Understand basic essential oil quality measures
- ▶ Understand basic essential oil safety
- ▶ Identify 3 ways essential oils are used
- ▶ Identify 1 or more oils that can be used for common primary care issues

Quality Assessments for Essential Oils

- ▶ All oils are not created equal - Essential oil industry is not regulated by FDA
- ▶ Sourcing matters
- ▶ In-House and 3rd Party Testing
 - ▶ GC/MS
 - ▶ One of the most common tests used to identify chemical constituents of a sample
 - ▶ Every batch testing versus “routine testing”
 - ▶ Transparency
 - ▶ Can be “faked” through sophisticated adulteration
 - ▶ Proteomic Profiling - “EO Fingerprint”
 - ▶ Effect on signaling pathways
 - ▶ Cannot be “faked”
 - ▶ Synergy Important

Pop Up Question

- ▶ True or False?
- ▶ If an oil bottle says that it is 100% pure, then you know it has undergone extensive testing and has been granted FDA approval.

Answer

- ▶ FALSE
- ▶ Essential oils are not regulated by the FDA and there are no national standards for testing as far as labeling goes. The bottle can be labeled as 100% pure and still be 100% synthetic. This is one of the biggest challenges in the EO industry as far as using oils for therapeutic purposes.
- ▶ For years, inconsistency in essential oils studies, likely from having inconsistent oils
- ▶ In the last 10 years, 10x more essential oil studies; pure oils showing more consistent effects

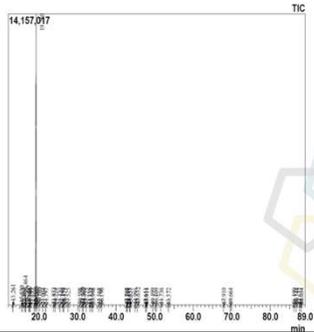
Quality Standards - Sourcing

- ▶ Native/Indigenous versus greenhouse
 - ▶ Latitude/Altitude Differences
 - ▶ Manuka in New Zealand (North, East Cape, Southern... different chemical makeup just miles apart)
 - ▶ Cannot fully replicate nature
 - ▶ Time of year/time of day (Jasmine blossoms at night)
 - ▶ Maturation of plant (Cardamom)
- ▶ Methods
 - ▶ Steam distilled - most common
 - ▶ Cold pressed from rind - citrus
 - ▶ Absolutes - oil chemically extracted from plant (Jasmine)
- ▶ Ethical considerations
 - ▶ Sustainability

Essential Oil Testing

- ▶ GC/MS - Gas chromatography/Mass spectrometry
 - ▶ Example of "pass" Grapefruit essential oil
 - ▶ 95% limonene

Chromatogram



Peak Report

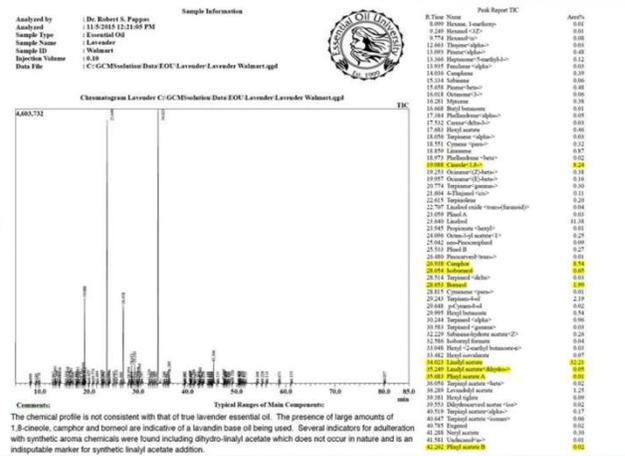
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13.883	beta-Pinene	0.04
16.484	Myrcene	1.87
18.868	alpha-Terpinene	0.04
19.427	n-Octanal	0.26
17.624	alpha-Phellandrene	0.04
20.781	beta-Caryophyllene	0.02
18.804	beta-Caryophyllene	0.01
18.201	Limonene	95.42
18.318	beta-Phellandrene	0.06
18.498	beta-Phellandrene	0.02
20.18	beta-Phellandrene	0.06
20.264	gamma-Terpinene	0.02
21.767	n-Octanal	0.06
20.892	Linalyl	0.06
24.224	n-Heptanal	0.06
25.141	Hexanoic Acid	0.02
26.19	alpha-Limonene oxide	0.02
26.476	beta-Limonene oxide	0.02
27.026	Cholesterol	0.02
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Essential Oil Testing

► GC/MS

- Example of a “fail” for a sample of lavender sold in retail stores

The chemical profile is not consistent with that of true lavender essential oil. The presence of large amounts of 1,8-cineole, camphor and bornol are indicative of a lavandin base oil being used. Several indicators for adulteration with synthetic aroma chemicals were found including dihydro-linalyl acetate which does not occur in nature and is an indisputable marker for synthetic linalyl acetate addition.



Essential Oil Safety

- ▶ Do not put oils in eyes, ears, or nose
- ▶ Neat application versus diluting with carrier oil
- ▶ Top carrier oils (fractionated coconut oil, almond oil, grapeseed oil, jojoba oil)
 - ▶ Reduced risk of skin reactions
 - ▶ Dilute out with carrier oil if a skin reaction occurs
 - ▶ Recommended for “hot oils” or when using oils on children, sensitive skin, elderly, pregnant women
- ▶ Citrus oils contain furocoumarins
 - ▶ Photosensitivity, avoid direct sunlight for 12-72 hours depending on the citrus oil
- ▶ Follow instructions on bottle regarding topical or internal use
 - ▶ Internal use: dosing is usually 1-2 drops at a time
 - ▶ Keep out of reach of children...just like you would medication

Pop Up Question

- ▶ Which of the following is a safe use of essential oils

- ▶ A. Applying copious amounts of an essential oil directly to the skin for a rash.
- ▶ B. Putting 1-2 drops of tea tree down the ear canal for an ear infection.
- ▶ C. Putting 10 drops of lemon essential oil in your water to help with edema.
- ▶ D. Diffusing 5 drops of lavender by your bed at night to help you sleep.

Answer

- ▶ Which of the following is a safe use of essential oils
- ▶ A. Applying copious amounts of an essential oil directly to the skin for a rash.
- ▶ B. Putting 1-2 drops of tea tree down the ear canal for an ear infection.
- ▶ C. Putting 10 drops of lemon essential oil in your water to help with edema.
- ▶ **D. Diffusing 5 drops of lavender by your bed at night to help you sleep. *****

Using Oils - Aromatically



- ▶ Excellent way to use oils if trying to change mood or level of consciousness
- ▶ Olfactory - Limbic
- ▶ Works quickly, usually within seconds to minutes
- ▶ Ways to use oils aromatically
 - ▶ Smelling straight from the bottle
 - ▶ Hand diffuser
 - ▶ Diffusers
 - ▶ Nasal "inhalers"
 - ▶ Spraying on a surface (such as bedding)



Using Oils - Topically

- ▶ Good for targeted relief (can also get the aromatic benefit)
 - ▶ Apply directly to targeted area
 - ▶ Can also apply to bottoms of feet or up/down spine
- ▶ Oils absorb through cutaneous tissue (skin) - highly volatile, use carrier oil if needed
- ▶ Carrier Oils - use with sensitive areas, with sensitive skin, on elderly, on children, on pregnant women, etc
- ▶ Examples of ways to use topically
 - ▶ Directly applied to skin (lavender on an itchy bug bite)
 - ▶ In a rollerball (diluted with carrier oil)
 - ▶ Mixed with lotion
 - ▶ Shampoo/Conditioner/Body Wash



Using Oils - Internally

- ▶ SAFETY FIRST - make sure you are only using high quality oils if you are going to ingest them and follow labeling instructions. Some oils are not safe for consumption.
- ▶ Good way to use oils if you need a systemic effect
 - ▶ Support healthy immune function
 - ▶ Support healthy respiratory function
 - ▶ Support healthy inflammatory response
- ▶ Examples
 - ▶ Putting 1-2 drops in water and drinking it (lemon in water); sublingual use
 - ▶ Avoid plastic
 - ▶ Putting 1-2 drops in an empty gelcap (veggie cap)
 - ▶ Supplements containing essential oils
- ▶ SAFETY TIP - some oils do interact with medications (clove, etc); if concerned, may want to use the oils aromatically and/or topically instead



Pop Up Question

- ▶ Amanda has a new pimple on her chin from wearing her mask 10+ hours per day. Tea Tree (melaleuca) has good evidence for helping with acne/pimples. What would be the best way for her to use tea tree for her mask-ne?
- ▶ A. Aromatically
- ▶ B. Topically
- ▶ C. Internally

Answer:

- ▶ Amanda has a new pimple on her chin from wearing her mask 10+ hours per day. Tea Tree (melaleuca) has good evidence for helping with acne/pimples. What would be the best way for her to use tea tree for her mask-ne?
- ▶ A. Aromatically
- ▶ **B. Topically *****
- ▶ C. Internally
- ▶ Topical use is good for targeted relief. Tea Tree is considered a gentle oil that can be applied “neat” or undiluted but can also be effective when diluted with a carrier oil.

Common Primary Care Concerns

- ▶ Pain
- ▶ Anxiety/Stress
- ▶ Depression/Mood
- ▶ Constipation/GI Issues/Nausea
- ▶ Infections

Essential Oils for Pain

- ▶ Many oils can be helpful in reducing pain/inflammation
 - ▶ Headaches - lavender, peppermint, frankincense, copaiba
 - ▶ Use aromatically (diffuse, nasal inhaler), topically (rollerball), and/or internally
 - ▶ Neuropathy - basil, cypress*, frankincense, wintergreen*, copaiba,
 - ▶ Other oils for neuropathy
 - ▶ peppermint (reduced/reversed chemo-induced neuropathy in one trial)
 - ▶ Sweet marjoram
 - ▶ Spike Lavender (has higher camphor and 1, 8 cineole content than *Lavendula agustifolia*, or pure lavender)
 - ▶ Thai Ginger
 - ▶ Use topically or internally (*do not ingest cypress or wintergreen)
 - ▶ Muscle/Joint Discomfort - peppermint, frankincense, lavender, wintergreen*, copaiba, turmeric
 - ▶ Use topically or internally (*do not ingest wintergreen)

Essential Oils for Anxiety/Stress

- ▶ Anxiety
 - ▶ Lavender - some studies show lavender being as effective as SSRIs or lorazepam without sedating effects; high in linalool and alpha-terpineol
 - ▶ Use aromatically, topically, and/or internally
 - ▶ Citrus Oils (lemon, bergamot, wild orange); high in d-limonene
 - ▶ Use aromatically, topically, and/or internally
 - ▶ Frankincense/Black Spruce; both high in alpha pinene
 - ▶ Use aromatically, topically
 - ▶ Can use frankincense internally
 - ▶ Rose/Neroli
 - ▶ Use aromatically and/or topically
 - ▶ Rosemary; high in linalool
 - ▶ Use aromatically and/or topically
- ▶ Most important thing is to let the patient choose the oils they are most drawn to in each category

Essential Oils for Depression/Mood

- ▶ Roman Chamomile
 - ▶ topically, aromatically, internally
- ▶ Bergamot (anxiolytic without sedation)
 - ▶ topically, aromatically, internally
- ▶ Pettigrain
 - ▶ topically, aromatically, internally
- ▶ Mandarin
 - ▶ topically, aromatically, internally (depending on variety)
- ▶ Lavender
 - ▶ topically, aromatically, internally
- ▶ Melissa
 - ▶ Topically, aromatically, internally
- ▶ Frankincense + Lavender +Bergamot = effective blend for depression in a study

Essential Oils for Constipation/GI Issues/Nausea

- ▶ Nausea & Vomiting
 - ▶ peppermint, spearmint, lemon, ginger (A, T, I)
- ▶ Indigestion
 - ▶ Peppermint (antispasmodic properties) (A, T, I)
- ▶ Constipation
 - ▶ Rosemary + Lemon - massage into abdomen, increased #BMs per week in 1 study
 - ▶ Peppermint (T, I)
- ▶ Diarrhea
 - ▶ Litsea (T, I)
 - ▶ Peppermint (T, I)

Essential Oils for Infection

- ▶ Many oils exhibit anti-microbial properties for gram+, gram-, or both; gram- is more difficult to treat due to outer membrane of the microbe
- ▶ Oils can often be used (and are often studied) in addition to antibiotics (cinnamon worked synergistically with clindamycin for *C. diff*)
- ▶ Good broad-spectrum oils include clove, thyme, oregano, basil, cinnamon/cassia, lemongrass
- ▶ Blend of cinnamon, wild carrot, eucalyptus and rosemary was shown to be effective against resistant staph and pseudomonas
- ▶ Oils can be an effective tool in treating infections without further contributing to antibiotic resistance

Pearls

- ▶ Essential oils can be a safe and effective treatment for many conditions but it is our job as providers to also know when they need prescription medications.
- ▶ Patient's will often ask:
 - ▶ Can I stop my _____ and use something natural?
 - ▶ Maybe but it depends on what it is prescribed for
 - ▶ Example: PPI - do they have an ulcer? Barrett's esophagus?
 - ▶ Example: statin - do they have ASCVD or diabetes? FH patient?
 - ▶ Example: BP meds - are they on that agent for HF? Renal protection? Anti-anginal?
 - ▶ Example: blood thinners - NO. The answer is almost always no.
 - ▶ Example: anti-arrhythmics - NO.
 - ▶ Example: pain medications - do they need an NSAID for autoimmune inflammatory disorder?

Pearls

- ▶ Start low and go slow just as you would with most medications
- ▶ Introduce oils 1-2 at a time to see if they are getting an effect
- ▶ Start with aromatic and/or topical use; may not need to use internally (may not always be safe)
- ▶ Pure oils - need to be purchased directly from the manufacturer to guarantee no risk of 3rd party adulteration (Amazon, Ebay, Facebook marketplace cannot be guaranteed for purity)

Independent 3rd party testing of oils

- ▶ Consumer's Advocate - Spring 2019
- ▶ Tested 3 oils (tea tree, lavender, peppermint) from 11 different oil companies
- ▶ Only 3 companies passed all 3 tests for purity.
- ▶ One company threatened a lawsuit to Consumer's Advocate and was removed from the final report.
 - ▶ Original report with all 11 companies available by request.

- ▶ More oil information (unbranded science research)
 - ▶ Aromatic Plant Research Center (APRC)
 - ▶ Tisserand Institute

More Info

- ▶ Intro to Oils Workshop - Free
- ▶ Mondays at 8pm CST on Zoom
 - ▶ <https://zoom.us/j/163986024>
 - ▶ Room code: 163-986-024

- ▶ Additional questions or requests for the Consumer's Advocate Report
 - ▶ aander11@gmail.com

References

- ▶ Alam, M., Roy, P., Miah, A., Mollick, S., Khan, M., Mahmud, M., & Khatus, S. (2013). Efficacy of peppermint oil in diarrhea predominant IBS - a double blind randomized placebo-controlled study. *Mymensingh Medical Journal* (22) 1: 27-30.
- ▶ Aromatic Plant Research Center. (2018). GC/MS report on grapefruit. <https://s3-us-west-2.amazonaws.com/qualityreports.sourcetoyou.com/2018/01/1801811+Grapefruit.pdf>
- ▶ Ashour, H. (2008). Antibacterial, antifungal, and anticancer activities of volatile oils and extracts from stems, leaves, and flowers of eucalyptus sideroxydon and eucalyptus torquata. *Cancer Biology and Therapy*
- ▶ Bagg, J., Jackson, M., Patrino, M., Ramage, G. (2006). Susceptibility to melaleuca alternifolia (tea tree) oil of yeasts isolated from the mouths of patients with advanced cancer. *Oral Oncology*
- ▶ Battaglia S. (2002). *The complete guide to aromatherapy (2nd ed)*. Brisbane QLD 4002. Australia: The international centre of holistic aromatherapy.
- ▶ Blain, E., Ali, A., Duance, V. (2012). Boswellia frereana (frankincense) suppresses cytokine-induced matrix metalloproteinase expression and production of pro-inflammatory molecules in articular cartilage. *Phytotherapy Research*
- ▶ Borhani, A., Motazedian, S., Rezali, R., Mohammadi, F., Pourmokatari, M., Khodaei, S., Vossoughi, M., Miri, R. (2010). Cutaneous application of menthol 10% solution as an abortive treatment of migraine without aura; a randomized, double-blind, placebo controlled, crossover study. *International Journal of Clinical Practice*
- ▶ Brochat, A, et al., (2017). Antibacterial, antifungal, and antiviral effects of three essential oil blends. *Microbiology Open* 6(4)
- ▶ Buckle, J. (2015). *Clinical aromatherapy: Essential oils in healthcare (3rd ed)*. St. Louis, MO: Elsevier
- ▶ Catalan, A. Pacheco, J., Martinex, A. Mondaco, M. (2008). In vitro and in vivo activity of Melaleuca alternifolia mixed with tissue conditioner on *Candida albicans*. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 105(3): 327-332.

References cont

- ▶ Crop & Food Research Broadsheet. (2002). Essential oil production from manuka and kanuka. Crop & Food Research Broadsheet. 116
- ▶ Cuaron, J., Dulal, S., Song, Y., Singh, A., Montelongo, C., Yu, W., Nagarajan, V., Jayaswal, R., Wilkinson, B., Gustafson, J. (2013). Tea tree oil-induced transcriptional alterations in *Staphylococcus aureus*. *Phytotherapy Research*
- ▶ Demirbag, B. & Erci, B. (2012). The effects of sleep and touch therapy on symptoms of fibromyalgia and depression. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3521885/>
- ▶ Dhifi, W., Bellili, S., Jazi, S., Bahloul, N., Mnif, W. (2016). Essential oils' chemical characterization and investigation of some biological activities: A critical review. *medicines* 3(25). DOI 10.3390
- ▶ in citrus oils by HPLC coupled with UV, fluorescence, and mass detection. *Journal of Agricultural Food Chemistry* 52 (23) 6879-6886. DOI: 10.1021/jf040164p
- ▶ Gallucci, N., Casero, C., Olivia, M., Zygadio, J., & Demo, M. (n.d.). Interaction between terpenes and penicillin on bacterial strains resistant to beta-lactam antibiotics. Argentina
- ▶ Garozaoa, A., Timpanarao, R., & Stiva, A. (2011). Activity of *Melaleuca alternifolia* (tea tree) oil on influenza virus A/PR/8: Study on the mechanism of action. *Antiviral Research* 89(1): 83-88
- ▶ Goal, N., Kim, H., Lao, RP. (2005). *Chronobiology International*
- ▶ Hammer, K., Carson, C., & Riley, T. (1999). Antimicrobial activity of essential oils and other plant extracts. *Journal of Applied Microbiology* 86(6): 985-990
- ▶ Ilmberger, J., Huebner, E., Mahrhofer, C., Dessovic, H., Kowarik, D., Bauchbauer, G. (2001). The influence of essential oils on human attention and alertness. *Chemical Senses*
- ▶ Inouye, S., Yamaguchi, H., Takizawa, T. (2001). Screening of the antibacterial effects of a variety of essential oils on respiratory tract pathogens, using a modified dilution assay method. *Infection and Chemotherapy: Official Journal of the Japan Society of Chemotherapy*
- ▶ Juergens, U., Stober, M., Schmidt-Schilling, L., Kleuver, T., Vetter, H. (1998). Anti-inflammatory effects of eucalyptol (1,8-cineole) in bronchial asthma: inhibition of arachidonic acid metabolism in human blood monocytes ex vivo. *European Journal of Medical Research* 3: 407-412

References cont.

- ▶ Kamie, M., Mahato, D., Lee, K., Bajpai, V. Gajurel, P., Gu, K., & Kumar, P. (2019). Ethnopharmacological properties and medicinal uses *Litsea cubeta*. *Plants (Basel)* 8(6). doi: 10.3390/plants8060150
- ▶ Kavanaugh, N., & Ribbeck, K. (2012). Selected antimicrobial essential oils eradicate psudomonas spp and staphylococcus aureus biofilms. *Appl Environ Microbiol* 78(11):4057-4061
- ▶ Khanna, R., McDonald, J., Levesque, B. (2014). Peppermint oil for the treatment of irritable bowel syndrome; a systematic review and meta-analysis. *Journal of Clinical Gastroenterology*
- ▶ Kim, M.J., Nam, E.S., Paik, S.I. (2005). The effects of aromatherapy on pain, depression, and life-satisfaction of arthritis patients. *Taehan Kanho Hakhoe Chi*
- ▶ Kim, M., Sakong, J., Kim, E., Kim, E., & Kim, E. (2005). Effect of aromatherapy massage for the relief of constipation in the elderly. *Taehan Hanho Hakhoe Chi* 35(1): 56-64
- ▶ Kohara, H., Miyauchi, T., Suehiro, Y., Ueoka, H., Takeyama, H., & Morita, T. (2004). Combined modality treatment of aromatherapy, footsoak, and reflexology relieves fatigue in patients with cancer. *Journal of Palliative Medicine* 7(6): 791-806
- ▶ Liao, Q., Qian, Z., Liu, R., An, L., Chen, X. (2013). Germacrone inhibits early stages of influenza virus infection. *Antiviral Res* 100(3): 578-588
- ▶ Li, X., Duan, S., Chu, C., Xu, J., Zeng, G., Lam, A., Zhou, J., Yin, Y., Fang, D., Reynolds, M., Gu, H., Jiang, L. (2013). Melaleuca alternifolia concentrate inhibits in vitro entry of influenza virus into host cells. *Molecules* 18(8): 9550-9566
- ▶ Mikhaeli, B., Maatooq, G., Badria F., Amer, M. (2003). Chemistry and immunomodulatory activity of frankincense oil. *Zeitschrift fur Naturforschung.*
- ▶ Nascimento, S. (2014). Cyclodextrin-complexed *Oscimum basilicum* leaves essential oil increases fos protein expression in the central nervous system and produces an antyhyperalgesic effect in animal models for fibromyalgia. *International journal of molecular sciences.*
- ▶ Pappas, R. (2017). GC/MS report on lavender. <https://remedygrove.com/traditional/Essential-Oil-Safety-Chemist-Uncovers-Adulterated-EOs-Sold-as-Pure-as-Well>
- ▶ Raudenbush, B, Raudenbush, G., Sears, R., & Wilson, I. (2009). Effects of peppermint and cinnamon odor administration on siulated driving alertness, mood and workload. *North American Journal of Psychology*, 11: 245-256