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World of Aromatherapy VII Conference and Trade Show

NAHA is in the process of planning our 7th World of Aromatherapy Conference to be held in the Autumn of 2014!

**Our goal:** To provide up-to-date clinical, holistic, plant-based health care and essential oil information with ground breaking talks on commonly misunderstood essential oils, internal use, integrating herbs into aromatherapy practice, and a range of other topics to inspire and expand the world of aromatherapy!

**STAY TUNED FOR FURTHER DETAILS!**

www.naha.org
Summer Teleseminar Schedule

NAHA offers educational teleseminars on various aspects of aromatherapy, business, herbs, and other related complementary healthcare topics once a month throughout the year.

**Dates:** The 2nd Thursday of each month.
**Times:** 5:30 pm Pacific, 6:30 pm Mountain, 7:30 pm Central, 8:30 pm Eastern
**Fee:** Teleseminars are free to NAHA Members and $50 for non-members (the only fees you may incur are from your long distance phone service).

If you are not currently a member, consider joining, or if you would like to attend a teleseminar without membership, please email: info@naha.org

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**June 13th Liz Fulcher**
**How to Use Pinterest for Your Aromatherapy Business**

Pinterest is becoming one of the most effective ways to market your business, especially if you can make it visually rich. Liz will share why your business should be using this engaging social media platform, and she will offer several specific ideas to help you effectively use Pinterest to draw attention to your aromatherapy business.

**About Liz Fulcher**
Liz brings 22 years of essential oil experience, research and education to her work as a Clinical Aromatherapist and Essential Oil Educator. Her passion is empowering others to become creatively inspired by essential oils and follow their dream of becoming successful Aromatherapists.

For ten years Liz was on the faculty of the Mt. Nittany Institute of Natural Health in State College, PA as Director of Aromatherapy Studies. She has served as the Pennsylvania Regional Director for the National Association of Holistic Aromatherapy (www.naha.org) for 12 years.

In 2010 Liz opened the Aromatic Wisdom Institute, School of Creative Aromatherapy in Selinsgrove, PA where she offers a NAHA-approved 235-hour Aromatherapy Certification Program plus other classes on the therapeutic and energetic uses of essential oils.

She shares her life with two dazzling sons, one mirthful grandson, one spoiled pug and one very patient husband.

**To contact Liz:**
**Email:** liz@aromaticwisdom.com
**Website:** www.AromaticWisdomInstitute.com
July 18th (Note: This is the 3rd Thursday of July)
Kayla Fioravanti
The Basics of How to Publish Your Own Book
In her new book, How to Self-Publish: The Author-preneur’s Guide to Publishing, author Kayla Fioravanti shares with you how to turn blogs, teaching handouts, e-books and ideas into self-published On Demand books that can go straight to online bookstores like Amazon and Barnes & Noble with little-to-no costs. Kayla walks with you step-by-step through the eBook and On Demand book publishing process. She provides the tools, resources, and steps necessary to build a platform, write a book, publish and promote it.

In her book Kayla removes the barriers and fears commonly associated with becoming an author and empower you to create long term income. After many years as an entrepreneur, being an author-preneur is her retirement. She will show you the ropes of being your own small business with YOU as your brand.

About Kayle Fioravanti
Kayla and her husband Dennis started their last successful company with just $50. Having built a profitable business with minimal start-up funds Kayla is living proof that you too can create an effective business on a shoestring budget. Other authors might tell you that you absolutely must spend thousands of dollars to self-publish, but Kayla believes that the American dream is accessible to anyone regardless of their income level. Kayla will show you how.

To contact Kayla: Email: kayla@kaylafioravanti.com  Website: http://kaylafioravanti.com/

August 8th  Sara Holmes
Essential Oil Blends for Pain Management
Sara will be discussing essential oil blends she has found beneficial for massage clients suffering conditions involving both chronic and acute pain. As a LMT, she has found aromatherapy massage offers improved and sustained results compared to massage alone. Sara will discuss the components of pain and blends for those suffering with Rheumatoid Arthritis, Fibromyalgia, Sciatica, and Osteo-arthritis.

About Sara Holmes
Sara Holmes BS RA LMT NCTMB, is the owner/therapist of Botanical Healing Arts LLC in Tuscola and the owner/operator of Sara’s Sanctuary and Wellness Retreat at Lake Sara in Effingham, IL.

She has a BS degree from Greenville College and is a Certified and Registered Aromatherapist and Licensed Massage Therapist. Sara is also an instructor at Parkland College in Champaign, IL and teaches massage, aromatherapy, and complementary therapies in healthcare. She teaches CE at Parkland College, Lakeland College and at Sara’s Sanctuary. Sara is a professional member of The National Association for Holistic Aromatherapy and The Alliance of International Aromatherapists.

She is the founder and coordinator for The Whole Health Advisory Board and Whole Health Lecture Series at Parkland College in Champaign, IL. Sara lives with her husband Chuck in Tuscola, IL where they enjoy nature with their four children and grandchildren.

To contact Sara: Email: botanicalhealingarts@hotmail.com  Website: www.botanicalhealingarts.com
So, how was your spring? Was your self care routine a refined, well practiced aspect of your day, full of gorgeous bottles brimming with aromatics? Yeah, it didn’t quite happen for me, either. While I had every intention of stocking my boudoir shelves with aromatic concoctions, I ended up going without, like a proverbial cobbler’s child. I, instead, chose one primary concoction, and that one did wonders. Our self care practice is not meant to be an albatross. If you aren’t quite meeting the goals you had for taking care of yourself, adjust the goals. Adjust them until you are proud of yourself, and until you cease muttering about, “not having time to blend a body polish much less actually use it,” and whatever you are doing makes a positive difference in your daily life.

And speaking of being overwhelmed, it’s summer! The tender green shoots that we lovingly watched push forth from the frozen earth have taken over our yards. The sun that we soaked up in the spring is now beginning to burn if we’re in it too long. Perhaps there are more weeds in the garden than anything else. Perhaps we have suffered a plant inflicted rash or two. Perhaps the middle of the day finds us hiding in the nearest, coolest shade.

Summer is the season most often idealized. With long days and abundant warmth, creativity and productivity are at their height; “Summer time, and the livin’s easy,” as the song goes. Even viewed metaphorically, the “summer of our lives” is idealized in Western culture, with women in their prime, child bearing years being prized. When we are at winter solstice how many poetic Facebook posts and holiday cards do we read pleading for the “return of the light?”

I’d like to offer a different perspective with this tangent: Summer time, for me, is motorcycle season. For the last two summers the Pirate and I have traveled over 16,000 miles on R. Girl, our Yamaha V-Star 650. As many of you may know motorcycle travel offers a perspective on the seasons that nothing else really can. With the wisdom of beginners we decided to cross the American South on our first adventure. Somewhere around Dallas we realized our goof. In order to be off the road by the time the temperature reached 100 degrees we began our days at 4:00 a.m., and limped into the nearest air conditioning by 11:00 a.m.. Riding a motorcycle through the Texas desert in mid-summer feels like a hair dryer is pointed at you, whilst a broiler provides a little extra heat from overhead. “Summer” begins to feel like an opponent; as does its defining warmth and light. You realize that darkness, coolness and rest have places in our lives.

All that is to say, while summer is indeed creative and productive, it’s also intense and overwhelming. While we revel in the season at hand; frolic in the grass, swim in the sea, laze on the patio, harvest from the garden, ride motorcycles, it’s wise to have some aromatic remedies on hand if poison ivy, sun burns, chafing and heat exhaustion are, occasionally, the cruel result.

Another tip to avoid feeling overwhelmed: have a product making party. Gather some fellow concoctors, have everyone make one Summer Self Care product, and share. In the process you might also end up sharing tips and techniques! Take a picture of your product making party and send it to me on face book while you’re at it.
Summer Self Care Formulas:
You will most likely notice a theme throughout these formulas: rose (Rosa damascena), lavender (Lavandula angustifolia) and frankincense (Boswellia carterii). I love these plants for their cooling, anti-inflammatory effects. **Note:** As Boswellia carterii is an endangered species of frankincense the other Boswellia species would be preferable, and provide similar, if not the same, therapeutic effects.

**Good Tempermint**
A mood mending spritzer is soothing not only to hot tempers, but also inflamed skin and impending heat exhaustion. For best enjoyment, store your spritzer in the fridge and liberally spray over your face and chest when you’ve come in from the heat of the day. If tempers flare, spray and take deep breaths as the aromatic mist falls onto your hair and face; repeat until “cooler heads prevail.” You can also spray directly onto sunburns. Always shake your spritzer before using to disperse the essential oils throughout the waters.

**Fill a 2 oz glass spray bottle with:**
- 2-6 drops peppermint (Mentha x piperita)
- 1 drop rose otto (Rosa damascena)

**Add:**
- 1/2 oz rose hydrosol (Rosa damascena)
- 1 oz distilled water
(You may eliminate the distilled water and use 1 ½ ounces hydrosol.)

You may find that with your face and hair laced with these lovely aromas you will receive longer hugs than usual.

**A Mid-summer Night’s Soak**
Ever have trouble falling asleep because of the heat? I have great childhood memories of summers at our cottage on Lake Erie, but that mid-west heat was bad news at bedtime. My Mom always filled the claw foot tub with cool water and soaked before climbing into the blanket-less bed. Here’s my twist:

**To a mixing bowl add:**
- One handful of organic rose petals (Rosa damascena)
- 1 cup Epsom salt
- 1 cup Dead Sea salt
- 1 cup Pacific Sea salt

**Essential oils:**
- 20 drops lavender (Lavandula angustifolia)
- 25 drops clary sage (Salvia sclarea)
- 15 drops frankincense (Boswellia carterii)

Blend ingredients thoroughly and store in a glass
jar. Add three tablespoons to a cool foot bath or one to two cups to a cool immersion bath. A foot bath provides great low-tech access to the body's thermostat. A few minutes with your feet in a cool basin of water full of these salts and you'll feel cool all over.

Also, if you experience night sweats or hot flashes, an immersion bath in these salts might be just the thing. Remember to add the salts once your basin of choice is full, so that you receive the olfactory benefits too. With skin as cool as a mermaid's, and just as fragrant, you can't help but have sweet dreams.

Post Sunbathing Ritual
In our rather "holistic" community the jury is still out on sunscreen: while it does seem to prevent sunburns, we don't yet know the long term effects of applying the product itself. Whatever your opinion, nourishing your skin after sun exposure is a must. These days it seems most people forget this step, feeling that the use of sunscreen is enough. In my experience it isn't. Using the following two products in a post sunbathing ritual is helpful, even if you are not sunburned, in maintaining radiant, fresh skin. Apply the Cooling Hydro-smear to clean skin. Once it has fully absorbed and your skin feels dry, apply the Un-burn Body Oil.

Cooling Hydro-smear
In a blender add equal parts:
- Aloe Vera gel (*Aloe barbadensis*)
- Rose hydrosol (*Rosa damascena*)

Blend the mixture on a high setting until the solution is frothy and thick-ish, but still in a liquid consistency. Store the mixture in the fridge in a pump bottle. For best enjoyment, apply to the skin while the product is cold. You may apply this smear all over your skin or just to your face for a vibrant pick-me-up.

Un-burn Body Oil
To a 4 oz. glass bottle add:
- 2 oz. sunflower oil (*Helianthus annuus*)
- 1 oz. jojoba oil (*Simmondsia chinensis*)
- 1 oz. hazelnut oil (*Corylus avellana*)

Essential oils:
- 17 drops frankincense (*Boswellia carterii*)
- 10 drops helichrysum (*Helichrysum italicum*)
- 40 drops Lavender (*Lavandula angustifolia*)

If you have a sunburn apply this oil to your skin as often as possible. Take the time to massage yourself as you apply it, as the circulation boost of massage is of great benefit to the skin. Whatever the season, a regular abhyanga, is a good idea. Loosely defined, abhyanga is a self massage done with infused oils, usually lasting about fifteen minutes. It's recommended that you do it prior to bathing, but I take it when I can get it, bath or not, especially when traveling. I enjoy blending myself a different abhyanga oil for each season. This is my summertime choice.

Itch-Ease
This blend is ideal for soothing poison ivy reactions but it would work for any sort of itchy insect bite too.

In a blender, food processor or mortar and pestle add:
- ½ cup French Green Clay
- ½ cup Fullers' Earth
- One handful of ground oats
- One handful of organic rose petals

Essential Oils
- 10 drops lavender (*Lavandula angustifolia*)
- 10 drops cypress (*Cupressus sempervirens*)
- 10 drops helichrysum (*Helichrysum italicum*)
Blend until oats and rose petals have broken down. Store in a glass jar.

During my years of living off the grid in a yome, I once suffered so severely from poison ivy that my eyes swelled shut and the joints in my arms locked up. Though I was without electricity or plumbing, I managed to nurse myself back to health within two days, start to finish. Here is my trick.

Keep the dry mixture at hand. Add about 1/4 cup to a dish and slowly add water until you have a thick, spreadable paste. With a brush, or your fingers, spread this paste over the effected area even if it is oozing. It will feel indescribably good. As the clay begins to dry, it will crack. You may notice that there are spots of oil forming on the surface. As you feel your skin beginning to feel hot and itchy again, rinse the clay off thoroughly with water. Repeat this process as often as necessary. I did this every fifteen minutes, for all of my waking hours, during the height of discomfort. When the itching has stopped, and the rash has subsided, begin nourishing your skin with the post sunbathing products listed previously.

Summertime Cocktail
Whether you are on a veranda, a beach or sitting at a picnic table, this is a great thing to sip. It’s elegant and refreshing.

To the very best water add:
- A splash of rose hydrosol
- Garnish with a cucumber slice, or whatever you have on hand (strawberry, blueberry, etc.)

Some may think this tastes a little “perfume-y,” but if you are careful to add only a splash of the hydrosol it’s as though you are a garden nymph licking dew from rose petals. Sip on this during a hot day and both your spirit and skin will stay fresh and sweet.

Lavender (Lavandula angustifolia)
If you find yourself too overwhelmed to concoct any of the formulas listed, or if you are traveling and have limited space, just keep a bottle of lavender around. While traveling on R. Girl, I lived out of one saddlebag for two months. I didn’t exactly have the room for a spiffy array of self care products. The thing that is always most valuable is my bottle of lavender, the only essential oil I bring with me. I have applied it neat to a raging sunburn, added it to hotel bathtubs with table salt, applied it directly to mosquito bites and arm pits, and huffed it during bouts of insomnia and PMS. It’s the magic bullet, truly!

However you decide to enjoy your summer; be it seaside, mountaintop, motorcycle or deliciously air conditioned office, I hope these formulas will add to your experience. You may continue to find enjoyment in many of the Spring Self Care formulas too, particularly the spring clean body powder. I will look forward to sharing more Seasonal Self Care with you in the autumn. Carry on, aromatic tribe!

About Katie Vie
Katie Vie has been immersed in the fragrant world of aromatherapy nearly half of her life. She lives in the mountains of Western North Carolina with her dog and a Pirate. Currently Katie designs and blends a product line called river island apothecary. From her studio she also maintains a small practice and teaches. Katie’s work is a marriage of therapy and beauty; a delight for the senses. Please visit her website to learn more: www.katievie.com
The mosquito repellent activity of 38 essential oils from plants at three concentrations was screened against the mosquito Aedes aegypti under laboratory conditions using human subjects. On a volunteer’s forearm, 0.1 mL of oil was applied per 30 cm² of exposed skin. When the tested oils were applied at a 10% or 50% concentration, none of them prevented mosquito bites for as long as 2 h, but the undiluted oils of Cymbopogon nardus (citronella), Pogostemon cablin (patchuli), Syzygium aromaticum (clove) and Zanthoxylum limonella (Thai name: makaen) were the most effective and provided 2 h of complete repellency.

From these initial results, three concentrations (10%, 50% and undiluted) of citronella, patchouli, clove and makaen were selected for repellency tests against Culex quinquefasciatus and Anopheles dirus. As expected, the undiluted oil showed the highest protection in each case. Clove oil gave the longest duration of 100% repellency (2–4 h) against all three species of mosquito. Copyright © 2005 John Wiley & Sons, Ltd.

Keywords: Mosquito repellent; Cymbopogon nardus; Pogostemon cablin; Syzygium aromaticum; Zanthoxylum limonella; Aedes aegypti; Culex quinquefasciatus; Anopheles dirus.

INTRODUCTION
Plants and plant-derived substances have been used to try to repel or kill mosquitoes and other domestic pest insects for a long time before the advent of synthetic chemicals (Curtis et al., 1989). A review on the uses of botanical derivatives against mosquitoes has been presented by Sukumar et al. (1991). Essential oils of a large number of plants have been found to have repellent properties against various haematophagous arthropods; some have formed the basis of commercial repellent formulations (Curtis et al., 1989). The repellency of these oils appears to be generally associated with the presence of one or more volatile mono-terpenoid constituents.

Although they are effective when freshly applied, their protective effects dissipated relatively rapidly (Buescher et al., 1982b; Rutledge et al., 1983; Curtis et al., 1989). The oils which have been reported as potential sources of insect repellents include citronella, cedar, verbena, pennyroyal, geranium, lavender, pine, cajeput, cinnamon, rosemary, basil, thyme, allspice, garlic and peppermint. Sharma et al. (1993) have reported the effectiveness of neem oil as a method of protection from mosquitoes which is safe and does not use synthetic chemicals. In laboratory tests in the USA (Barnard, 1999), thyme and clove oils provided 1.5–3.5 h of protection against Aedes aegypti. Citronella oil, in concentrations ranging from 0.05% to 15%, is used alone or in combination with cedarwood, lavender, peppermint, clove, eucalyptus and garlic in a number of commercial insect repellent products (Fradin, 1998). Currently, a lemon eucalyptus extract which comes from the plant Eucalyptus maculata citriodora with the principal active ingredient p-menthane-3,8-diol (PMD) has shown particularly good results in its mosquito repellent properties when tests were
carried out under laboratory and field conditions. This repellent has been found to be effective against mosquitoes, midges, ticks and the stable fly (Curtis et al., 1989; Trigg, 1996; Trigg and Hill, 1996; Govere et al., 2000). Oils extracted from plants are widely used as fragrances in cosmetics, food additives, household products and medicines. The US Food and Drug Administration (FDA) generally recognize these as safe.

Recently, there have been many reports concerning the repellent properties of many kinds of essential oils; however, most of the results came from artificial (in vitro) testing methods using cloth, filter paper, animal membrane or olfactometry but some came from more realistic (in vivo) methods utilizing animals or human subjects (Rutledge et al., 1964; Barnard, 2000). Results from different methods cannot be compared directly because these methods yield results strongly related to the laboratory conditions used. The evaluation of repellency should preferably be carried out using human subjects, because laboratory animals may simulate inadequately the condition of human skin to which repellents will eventually be applied (WHO, 1996; Barnard, 2000; Moore, 2003).

In the present study, attempts have been made to characterize the relationship between different concentrations of 38 selected essential oils against *Aedes aegypti* mosquitoes using human subjects with caged mosquitoes. The more promising of the oils were also studied for their repellent activities against *Culex quinquefasciatus* and *Anopheles dirus*.

**MATERIAL AND METHODS**

**Essential oils.** The names and sources of 38 essential oils are presented in Table 1. *Ageratum conyzoides* (leaves and flowers), *Spilanthes acmella* (flowers), *Vitex negundo* (leaves) and *Zanthoxylum limonella* (seed and fruit) were obtained from northern Thailand. Herbarium specimens were identified by a botanist and deposited at the Forest Herbarium National Park, Wildlife and Plant Conservation Department, Thailand. They were subsequently extracted for essential oils by steam distillation.

About 1 kg at a time of fresh plant material was cut into a small pieces and placed in a distillation flask with approximately three times as much water and 8–10 glass beads. The distillation chamber was heated to about 120 °C and allowed to boil until the distillation was completed. The distillate was collected in a separating funnel with which the aqueous portion could be separated from the oil. The yield of each essential oil is shown in Table 2. These oils were kept at 4 °C until they were tested for mosquito repellency.

Apart from the oils extracted from plant material as specified above, another 32 essential oils were purchased from the TCF Co. (Bangkok, Thailand).

**Mosquitoes.** The mosquito species tested were *Ae. aegypti*, *An. dirus* and *Cx quinquefasciatus*. These mosquitoes were uninfected laboratory strains and were reared in the insectary of the Insecticide Research Unit at the Department of Medical Entomology, Faculty of Tropical Medicine, Mahidol University. The methods for mass rearing were slight modifications of the procedure described by Limsuwan et al. (1987).

**Subjects.** This study used three human subjects who agreed to take part in testing the repellency of each kind of oil.

**Repellent assay.** The repellency of the essential oils was evaluated by using an arm-in-cage test (Schreck and McGovern, 1989; WHO, 1996). Each oil was tested undiluted and also was diluted with 70% alcohol to 10% and 50% concentration. An arm was covered with a rubber sleeve with a 3 × 10 cm window and 0.1 mL of a 10% or 50% concentration or undiluted oil was applied.

The treated arm was exposed for 1 min to 250 hungry female mosquitoes, 4–5 days old. Every 30 min after treatment the treated arm was re-exposed to mosquitoes and the time was recorded at which the first bite occurred.

Following the method of Schreck and McGovern (1989), the arm exposure at 30-min intervals continued until two bites occurred and one further exposure was made to check that complete repellency had indeed failed. The duration (min) of complete repellency after application of repellent was used as a measure of the repellency of the
Table 1. Name and source of essential oils

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Family</th>
<th>English Name</th>
<th>Thai Name</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ageratum conyzoides</em></td>
<td>Asteraceae</td>
<td>-</td>
<td>Sap rang sap ka</td>
<td>Lab extract</td>
</tr>
<tr>
<td><em>Allium savitum - L.</em></td>
<td>Alliaceae</td>
<td>Garlic</td>
<td>Kra team</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>A. tuberosum - Roxb.</em></td>
<td></td>
<td>Oriental garlic</td>
<td>Kui chay</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Apium graveolens</em> Linne</td>
<td>Umbelliferae</td>
<td>-</td>
<td>Khoun chay</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Boesenbergia pandurata</em> Roxb. Schlir*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Canagium odoratum</em> – Baill. Ex King*</td>
<td>Annonaceae</td>
<td>Ylang ylang</td>
<td>Kar dung nga</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Cedrus deodara</em></td>
<td>Pinaceae</td>
<td>Cedar</td>
<td>-</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Citrus hystrix</em> – Dc.*</td>
<td>Rutaceae</td>
<td>Leech lime</td>
<td>Ma krood</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>C. reticulata</em> – Bianco</td>
<td>Rutaceae</td>
<td>Tangerine or orange</td>
<td>Soam keu wkan</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Curcuma longa</em> – L.*</td>
<td>Zingiberaceae</td>
<td>-</td>
<td>Opp chey cheen</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Cymbopogon citratus</em> – (Dc.) Stapf*</td>
<td>Poaceae</td>
<td>Lemon grass</td>
<td>Ta kai</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>C. nardus</em> – (L.) Rendle</td>
<td>Poaceae</td>
<td>Citronella grass</td>
<td>Ta kai hom</td>
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</tr>
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<td><em>Eucalyptus globulus</em> – Labill.*</td>
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<td>Lavender</td>
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<td><em>Myristica fragrans</em> – Houtt.*</td>
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<td>Nutmeg</td>
<td>Chan tade</td>
<td>Commercial</td>
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<td><em>Ocimum basilicum</em> – L.*</td>
<td>Apiaceae</td>
<td>Sweet basil</td>
<td>Ho la pa</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>O. sanctum</em> – L.*</td>
<td>Apiaceae</td>
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<td><em>Pelargonium graveolens</em></td>
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<td>Geranium</td>
<td>-</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Pimpinella anism</em></td>
<td>Umbelliferae</td>
<td>-</td>
<td>-</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Pinus sylvestris</em> – L.*</td>
<td>Pinaceae</td>
<td>-</td>
<td>Soan</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Piper betle</em> – L.*</td>
<td>Piperaceae</td>
<td>Betel pepper</td>
<td>Ploo</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>P. nigrum</em> – L.*</td>
<td>Piperaceae</td>
<td>Black pepper</td>
<td>Prik tai</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Pogostemon cablin</em> – Blanco</td>
<td>Apiaceae</td>
<td>Patchouli</td>
<td>Pim sane bai</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Sesamum indicum</em> – L.*</td>
<td>Pedaliaceae</td>
<td>Sesame</td>
<td>Nga</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Spilanthes acmella</em> – (L.) Murr.*</td>
<td>Asteraceae</td>
<td>Para cress</td>
<td>Pak kard hou wan</td>
<td>Lab extract</td>
</tr>
<tr>
<td><em>Syzygium aromaticum</em> – (L.) Merr.*</td>
<td>Myrtaceae</td>
<td>Clove</td>
<td>Khan plooo</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Vetiveria zizanioides</em> – Nash*</td>
<td>Poaceae</td>
<td>Vetiver</td>
<td>Yar fak hom</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Vitex negundo</em> – Nash*</td>
<td>Labiatae</td>
<td>Indian privet</td>
<td>Khon tee kha mow</td>
<td>Lab extract</td>
</tr>
<tr>
<td><em>Zanthoxylum limonella</em> – Alston*</td>
<td>Rutaceae</td>
<td>-</td>
<td>Makaen, kam jad torn</td>
<td>Lab extract</td>
</tr>
<tr>
<td><em>Zingiber officinal</em> – Roscoe</td>
<td>Zingiberaceae</td>
<td>Ginger</td>
<td>Khing</td>
<td>Commercial</td>
</tr>
<tr>
<td><em>Z. purpureum</em> – Roscoe</td>
<td>Zingiberaceae</td>
<td>-</td>
<td>Plai</td>
<td>Commercial</td>
</tr>
</tbody>
</table>
RESULTS
The results of the initial screening tests showing the repellent activity of 38 essential oils from plants are given in Table 3.

Of the essential oils tested, high concentrations of C. nardus, P. cablin, S. aromaticum and Z. limonella (fruit) were the most effective and provided at least 2 h complete repellency against Ae. aegypti. The protection times of these oils were less when they were diluted. At 50% concentration, C. nardus, P. cablin, S. aromaticum and Z. limonella (fruit) showed 50, 60, 70 and 80 min protection, respectively and, the repellent activity decreased to 30 min or less when diluted to 10%. Based on these results, C. nardus, P. cablin, S. aromaticum and Z. limonella (fruit) were further studied for effectiveness against two other mosquito species, Cx quinquefasciatus and An. dirus in comparison with Ae. aegypti. The results are presented in Table 4.

The undiluted oil showed the highest protection time in each case. Among the four kinds of oil tested, S. aromaticum demonstrated the longest protection time against all three species of mosquito and the order of potency based on the protection time was Cx quinquefasciatus > An. dirus > Ae. aegypti. The mean durations of protection from bites for S. aromaticum were 240, 210 and 120 min against Cx quinquefasciatus, An. dirus and Ae. aegypti, respectively. At a 50% concentration S. aromaticum provided 120 min of complete protection against both An. dirus and Cx quinquefasciatus. P. cablin and Z. limonella protected for 120 and 130 min, respectively, against An. dirus.

The protection times of all oils at 10% concentration were less than 120 min against all three species of mosquito.

DISCUSSION
Repellency evaluation is preferably carried out using human subjects, as testing repellents on animals or artificial membranes may not give representative data of how the repellent will perform when applied to a human skin (Nicolaides et al., 1968; Cockcroft et al., 1998). Our studies evaluated the repellent activities of 38 oils against Ae. aegypti mosquitoes which are anthropophilic, are easy to rear under laboratory conditions and are avid biters. The tests showed that of 38 undiluted essential oils, the most effective were extracted from C. nardus, P. cablin, S. aromaticum and Z. limonella which provided complete repellency for 120 min. The results in the reports of United States Department of Agriculture (1952–1964) also documented the complete repellency of S. aromaticum and C. nardus for 120 min against Ae. aegypti.

According to the recommendation of the US Environmental Protection Agency (2003), using Ae. aegypti along with a representative human biting species from both the Anopheles and Culex genera for the laboratory studies of repellent efficacy can provide information on the difference in response of the main vector genera of mosquitoes. Rutledge et al. (1983) showed that patterns of sensitivity to repellent compounds varied between mosquito genera. Their experiments showed, for 31 repellents, that Ochlerotatus (Ochlerotatus) taeniorhynchus and Cx pipiens were significantly more sensitive than

### Table 2. Description of 5 essential oils that were obtained from steam distillation in the laboratory

<table>
<thead>
<tr>
<th>Plant</th>
<th>Collection place and date</th>
<th>Part used</th>
<th>Fresh plant (g)</th>
<th>Essential oil (g)</th>
<th>% Yield (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. conyzoides</td>
<td>Chaing Rai, 22 January 2002</td>
<td>Leaves</td>
<td>1000</td>
<td>1.25</td>
<td>0.13</td>
</tr>
<tr>
<td>A. conyzoides</td>
<td>Chaing Rai, 23 January 2002</td>
<td>Flowers</td>
<td>950</td>
<td>1.14</td>
<td>0.12</td>
</tr>
<tr>
<td>S. acmella</td>
<td>Chaing Rai, 26 January 2002</td>
<td>Flowers</td>
<td>1200</td>
<td>1.68</td>
<td>0.14</td>
</tr>
<tr>
<td>V. negundo</td>
<td>Bangkok, 10 March 2002</td>
<td>Leaves</td>
<td>1000</td>
<td>1.10</td>
<td>0.11</td>
</tr>
<tr>
<td>Z. limonella</td>
<td>Chaing Rai, 26 January 2002</td>
<td>Seed</td>
<td>1000</td>
<td>20.8</td>
<td>2.08</td>
</tr>
<tr>
<td>Z. limonella</td>
<td>Chaing Rai, 26 January 2002</td>
<td>Fruit</td>
<td>1000</td>
<td>125.00</td>
<td>12.50</td>
</tr>
</tbody>
</table>

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Table 3. Repellent activity of 38 essential oils (undiluted or as 10% or 50% dilutions) against Ae. aegypti mosquitoes

<table>
<thead>
<tr>
<th>Oil</th>
<th>Duration (min) of complete repellency</th>
<th>10%</th>
<th>50%</th>
<th>Undiluted</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. conyzoides (leaf)</td>
<td>0, 30, 30; (20)</td>
<td>30,30,30; (30)</td>
<td>60,60,60; (60)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>A. conyzoides (flower)</td>
<td>0, 0, 30; (10)</td>
<td>30,30,30; (30)</td>
<td>30,30,60; (40)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>A. sativum</td>
<td>0, 0, 30; (10)</td>
<td>30,30,60; (40)</td>
<td>60,60,90; (70)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>A. tuberosum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A. graveolens</td>
<td>0</td>
<td>60,60,60; (60)</td>
<td>30,30,60; (40)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>B. pandurata</td>
<td>0</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>C. odoratum</td>
<td>0</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>C. deodora</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C. hystrich</td>
<td>0, 0, 30; (10)</td>
<td>30,30,30; (30)</td>
<td>60,60,60; (60)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>C. reticulata</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>C. funebris</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0, 0, 30; (10)</td>
<td>0</td>
</tr>
<tr>
<td>C. longa</td>
<td>0</td>
<td>0</td>
<td>0, 0, 30; (10)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>C. citratus</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>C. nardus</td>
<td>0</td>
<td>60,60,60; (60)</td>
<td>120,120,120; (120)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>E. globulus</td>
<td>0</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>L. angustifolia</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0, 0, 30; (10)</td>
<td>0</td>
</tr>
<tr>
<td>L. cubeba</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>M. arvensis</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>30,60,60; (50)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>M. piperita</td>
<td>0</td>
<td>0</td>
<td>30,30,30; (50)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>M. spicata</td>
<td>0, 0, 30; (10)</td>
<td>30,30,30; (30)</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>M. fragrans</td>
<td>0</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>0</td>
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</tr>
<tr>
<td>O. basilicum</td>
<td>0</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>O. sanctum</td>
<td>0</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>P. graveolens</td>
<td>0, 0, 30; (10)</td>
<td>30,30,60; (40)</td>
<td>30,60,60; (50)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>P. anisum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P. sylvestris</td>
<td>0</td>
<td>30,30,60; (40)</td>
<td>60,60,60; (60)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>P. betle</td>
<td>0</td>
<td>60,60,90; (70)</td>
<td>90,90,90; (90)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>P. nigrum</td>
<td>0</td>
<td>0</td>
<td>90,90,90; (90)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>P. cablin</td>
<td>0</td>
<td>60,60,60; (60)</td>
<td>120,120,120; (120)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>S. indicum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>S. acmella</td>
<td>30, 30, 30; (30)</td>
<td>0</td>
<td>30,30,30; (30)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>S. aromaticum</td>
<td>30, 30, 30; (30)</td>
<td>60,60,90; (70)</td>
<td>120,120,120; (120)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>V. zizanioides</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0, 0, 30; (10)</td>
<td>0</td>
</tr>
<tr>
<td>V. negundo</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0, 0, 30; (10)</td>
<td>0</td>
</tr>
<tr>
<td>Z. limonella (seed)</td>
<td>30, 30, 30; (30)</td>
<td>60,90,90; (80)</td>
<td>90,90,120; (100)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Z. limonella (fruit)</td>
<td>30, 30, 30; (30)</td>
<td>60,90,90; (80)</td>
<td>120,120,120; (120)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Z. purpureum</td>
<td>0</td>
<td>0</td>
<td>60,60,60; (60)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Z. officinale</td>
<td>0</td>
<td>0</td>
<td>30,30,60; (40)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*In all cases many more than two bites were obtained on the untreated control arm during the first exposure just before the time of application of the repellent. Duration of complete repellancy (as defined in the methods sections) recorded by three volunteers; (with mean of the three).
were Ae. aegypti and An. albimanus. Furthermore Ae. aegypti, the traditional test species for repellent studies, was an exceptionally poor predictor for the responses of An. stephensi to repellents. Curtis et al. (1987) showed that Anopheles mosquitoes were less sensitive to DEET and other repellent chemicals than Ae. aegypti.

The present results showed that of the 38 oils tested, the undiluted oil of C. nardus, P. cablin and Z. limonella provided better protection against Ae. aegypti, Cx quinquefasciatus and An. dirus. The mean duration of repellency of S. aromaticum oil was slightly greater than from the other three oils against Cx quinquefasciatus (240 min) or An. dirus (210 min).

For oils manifesting mosquito repellency, the protection time generally increased with increasing oil concentration. None of the oils prevented mosquito biting for as long as 120 min when used at 10% or 50% concentration.

It was reported by Li et al. (1974) (and summarized in English by Curtis et al. (1989)) that, against Ae. aegypti, Lemon Eucalyptus oil has a protection time of only 1 h but Table 4 showed that P. cablin, S. aromaticum and Z. limonella oils gave 2 h repellency (Table 4). However, Li et al. (1974) showed that the waste distillate of Lemon Eucalyptus contained an active repellent p-menthane diol (PMD) and he found that a 15% concentration of PMD obtained from Lemon Eucalyptus oil distillation showed 4.4 h protection. This was better than 10% of P. cablin, S. aromaticum and Z. limonella oils which gave no more than half an hour protection against Ae. aegypti (Table 4). A 50% concentration of PMD gave 13 h protection against this species (Li et al., 1974).

At a range of concentrations applied to humans, the protection time of PMD against Ae. aegypti was proportional to the amounts applied and was definitely higher than the protection time of the oils of P. cablin, S. aromaticum and Z. limonella.

For possible use by low-income rural communities, where the highest incidence of mosquito-borne diseases are reported, our studies have added the cheaply available P. cablin, S. aromaticum

<table>
<thead>
<tr>
<th>Mosquito spp. and Oil</th>
<th>10%</th>
<th>50%</th>
<th>Undiluted</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ae. aegypti</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. nardus</td>
<td>0</td>
<td>30,60,60; (50)</td>
<td>120,120,120; (120)</td>
<td>0</td>
</tr>
<tr>
<td>P. cablin</td>
<td>0</td>
<td>60,60,60; (60)</td>
<td>120,120,120; (120)</td>
<td>0</td>
</tr>
<tr>
<td>Z. limonella</td>
<td>30,30,30; (30)</td>
<td>60,90,90; (80)</td>
<td>120,120,120; (120)</td>
<td>0</td>
</tr>
<tr>
<td>S. aromaticum</td>
<td>30,30,30; (30)</td>
<td>60,60,60; (70)</td>
<td>120,120,120; (120)</td>
<td>0</td>
</tr>
<tr>
<td>Cx quinquefasciatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. nardus</td>
<td>30,30,60; (40)</td>
<td>60,90,90; (80)</td>
<td>90,90,120; (100)</td>
<td>0</td>
</tr>
<tr>
<td>P. cablin</td>
<td>60,60,60; (60)</td>
<td>60,90,120; (90)</td>
<td>150,150,150 (150)</td>
<td>0</td>
</tr>
<tr>
<td>Z. limonella</td>
<td>30,30,90; (50)</td>
<td>90,90,120; (100)</td>
<td>120,180,210; (240)</td>
<td>0</td>
</tr>
<tr>
<td>S. aromaticum</td>
<td>30,90,120; (80)</td>
<td>120,120,120; (120)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>An. dirus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. nardus</td>
<td>30,30,60; (40)</td>
<td>30,30,30; (30)</td>
<td>60,60,90; (70)</td>
<td>0</td>
</tr>
<tr>
<td>P. cablin</td>
<td>30,90,120; (80)</td>
<td>90,120,150; (120)</td>
<td>150,180,180; (170)</td>
<td>0</td>
</tr>
<tr>
<td>Z. limonella</td>
<td>60,60,60; (60)</td>
<td>60,150,180; (130)</td>
<td>180,180,210; (190)</td>
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</tr>
<tr>
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<td>60,90,90; (80)</td>
<td>150,150,180; (160)</td>
<td>210,210,210; (210)</td>
<td>0</td>
</tr>
</tbody>
</table>

* In all cases many more than two bites were obtained from each mosquito species on the untreated control arm just before the tested arm was treated. Duration of complete repellency (as defined in the methods section) recorded by three volunteers; (with mean of the three).
and *Z. limonella* to the list of effective plant based repellents.

Citronella from *C. nardus* belongs to the genus *Cymbopogon* which yield the most popular repellents in the world. In South Africa, *C. excavatus* gave 100% repellency for 2 h, when it was evaluated in the laboratory against *An. arabiensis* and its repellency decreased to 59.3% after 4 h (Govere et al., 2000). In Thailand, *C. winterianus* oil, mixed with 5% vanillin, gave 100% protection for 6 h against *Ae. aegypti, Cx quinquefasciatus* and *An. dirus* and compared favourably with 25% DEET (Tawatsin et al., 2001). The pure oil of *C. martinii martinii* (palmarosa) provided 100% repellency for 12 h against Anopheles mosquitoes in a field trial which was carried out by using pairs of volunteers who sat together, one of whom was treated with the oil and other was not (Ansari and Razdan, 1994).

These plants contain varying amounts of several insect repellent chemicals although environmental conditions cause the content of volatile oils in plants to vary greatly. The repellent compounds contained in this group include alpha pinene, camphene, camphor, geraniol and terpenen-4-ol. The most abundant repellent molecules found in the group are citronellal, citronellol and geraniol (Duke, 1983) found a synthetic derivative of citronella (a mono-terpene aldehyde), is the main constituent of citronella oil and has been used as the active ingredient of commercial repellents. In addition, their high citronellal content makes the plants of this genus potential candidates for PMD production since citronellal is a precursor of this molecule. The grasses grow readily and rapidly throughout much of the tropics and a simple steam distillation is sufficient to extract the repellent fractions. The plants in this genus are pleasant smelling and are widely used in traditional medicine.

*S. aromaticum* or ‘clove oil’ was reported the most effective mosquito repellent in the comparison made by Barnard (1999) and in the present study. Barnard showed that this oil gave 90 to 225 min of protection against *Ae. aegypti* and 75 to 213 min of protection against *An. albimanus*, depending on oil concentration. The major constituents of clove oil are eugenol, eugenolacetate and beta-caryophyllene (Leung and Foster, 1996). Eugenol is repellent to *Ae. aegypti* (USDA, 1954) and *An. gambiae* (Chogo and Crank, 1981).

Neither eugenol-acetate nor beta-caryophyllene are repellent to *Ae. aegypti* (USDA, 1954), but neither has been tested for repellency to Anopheles mosquitoes. Eugenol also acts as an antioxidant in oleogenous foods, as an anticalminative, antispasmodic and antiseptic in pharmacy, and as an antimicrobial agent (Farag et al., 1989a, 1989b). Clove oil is used in oriental medicine as a vermifuge, and as an antibacterial and/or antifungal agent (Awuah and Ellis, 2002; Dorman and Deans, 2000). Miyazawa and Hisama (2001) reported that a methanol extract from clove showed an antimutagenic effect. Clove oil is very widely used in clinical dentistry in root canal therapy and temporary fillings, and exhibits an antimicrobial activity against oral bacteria that are commonly associated with dental caries and periodontal disease (Cai and Wu, 1996).

For *P. cablin*, there has been no previous report of mosquito repellent activity. This plant has been used against the common cold and as an antifungal agent in traditional medicine. It is cultivated extensively in Indonesia, Malaysia, China and Brazil for its essential oil (patchouli oil), which is important to the perfumery industry. This oil contains many mono- and sesqui-terpenoids, and several flavonoids and alkaloids (Tsubaki et al., 1967; Hitokawa et al., 1968; Terhune et al., 1973; Itokawa et al., 1981). *P. cablin* has as strong an antimutagenic effect as *S. aromaticum* (Miyazawa et al., 2000) and has antibacterial activity (Osawa et al., 1990) and is used for the prevention of emphysema in the convalescent stage (Fu, 1989).

For *Z. limonella*, there is only one current report from India that showed the oil gave a protection time of 4–5 h against *Ae. albopictus* mosquitoes (Das et al., 2003). There are no previous publications showing its mosquito repellent activity against *Ae. aegypti, Cx quinquefasciatus, An. dirus* and *Ma. uniformis*. This plant is mentioned in the website www.indmedplantskr.org/Zanthoxylum_limonella.htm as some members of this genus have an insecticidal effect. A yield of 12.5% (w/w) of essential oil was obtained with this species which is higher than that of the other plants studied (Table 2) and is likely to...
make Z. limonella more cost effective than the other three plants. Itthipanichpong et al. (2002) reported the chemical compositions of the essential oil distilled from the fruit of Z. limonella in Thailand and found the presence of 33 chemical components. Limonene (31.1%), terpin-4-ol (13.9%) and sabinene (9.1%) were found to be the major components. They also reported that the essential oil from the fruit of this plant possessed a stimulatory effect on smooth muscle preparations by non-specific mechanisms.

These initial results clearly demonstrated that the essential oils from P. cablin, S. aromaticum and Z. limonella plants performed as mosquito repellents about as equally well as citronella oil. As indicated above, these oils are used in medicine, perfumery and flavouring of food and are considered non-toxic to humans and are environmentally friendly.

Further studies are needed to develop appropriate formulations including a fixative, which would increase their efficacy and cost effectiveness. Field trials should be carried out, particularly to evaluate the operational feasibility and dermal toxicity over a long period, especially to infants and children. It is important to determine whether widespread use of one of these repellents would produce an overall reduction of vector biting in a community or would simply divert biting from repellent users to non-users.

Acknowledgements
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Comparative Repellency of 38 Essential Oils Against Mosquito Bites continued


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Aromatherapy Journal Summer 2013.2
Essential Oil Monograph:

German Chamomile

by Jade Shutes, B.A., Dipl. AT.

Taxonomy

Botanical Family: Asteraceae syn. Compositae

Latin names: Matricaria recutita syn. Matricaria chamomilla

Other common names: Hungarian Chamomile, True chamomile, Common chamomile, Small camomile, Horse gowan

Botany and History

Botany: German chamomile is an annual herbaceous plant growing to a height of between one to two feet. The flowers are grouped in solitary flower heads at the top of the branches. (Abdoul-Latif, et al. 2011) The daisy-like white flowers and yellow center are strongly aromatic. Unlike Roman chamomile, whose leaves and flowers are strongly aromatic, only the flowers of German chamomile yield its beautiful aroma. German chamomile blooms during the late spring to early summer. It does not like the heat of the middle and the end of summer. It is a native to parts of Europe and Asia.

The Latin name of recutitus refers to the petals, meaning truncated or trimmed. The name of “chamomilla” may well originate from Dioscorides and Plinius the Elder who — due to the pomaceous odor — called the plant “chamaimelon.” Chamaimelon means, more or less, “low growing apple tree” (Greek: chamai = low, melon = apple). Plinius the Elder wrote about “Chamaimelon quoniam odorem mali habet.” (Franke, 2005)

History and Myth: The curative effect of chamomile has been known for over 2500 years. Hippocrates gives a description of the drug in the 5th century B.C., and chamomile appears as a medicinal plant in the work De Materia Medica written by Dioscorides (1st century A.D.). Galen and Asclepius describe the application of a chamomile at some length. In Palladius’ writings dating back to the 4th or 5th century, notes about chamomile are to be found as well. Medical applications continued in the Middle Ages. Saladin von Asculum mentioned the blue volatile oil of chamomile in 1488 and Hieronymus Brunschwig (image below from www.wikipedia.com) - Hieronymus Brunschwig described the distillation of the volatile chamomile in 1500. (Franke, 2005) German chamomile (Matricaria chamomilla L.) is one of the important medicinal herbs native to southern and eastern Europe. Its medicinal usage dates back to antiquity where such notables as Hippocrates, Galen, and Asclepius made written reference to it. (Thorne Research, Inc) German chamomile has been used since ancient times in treating colic, diarrhea, indigestion, insomnia, infantile convulsions, toothache, bleeding and swollen gums, and other ailments, usually in the
form of an infusion, decoction, or tincture. It is also used for sciatica, gout, lumbago, skin problems, and inflammation, in the form of compresses. (Leung & Foster, 2003)

Chamomile has a long history of use in folk medicine as a sedative for cross, whining, irritated babies, and the problems incident to babyhood, such as teething, earaches, and intolerance to pain. (Wood, 2008)

**Regulatory Information**

CAS #: 8002-66-2  
EINECS No: 282-006-5  
FEMA #: 2273  
GRAS: 182.20 and 182.10  
INCI Name: Chamomilla recutita flower oil

**Extraction Information**

**Countries of Origin:** Hungary, Eastern Europe, North America, Australia  
**Part of Plant Used:** Flowers  
**Extraction Method:** Distillation  
**Oil Content:** 0.24 to 2% (Gupta, et al. 2010 and Leung & Foster 2003)  
**Color of Oil:** Dark blue. This essential oil is known to oxidize rapidly, turning the color from blue to green and then to brown. Once the essential oil has oxidized it should not be used, as it is no longer of therapeutic value.

**Blending Information**

**Odor Description:** Sweet, grassy, strong, similar to hay, herby aroma  
**Blending Factor:** 1  
**Note:** Mid to base

**Safety Information**

* Patch test individuals prone to hypersensitivities, particularly to ragweed, which is in the same botanical family.  
* Despite reports of skin reactions and dermatitis from topical use of chamomile, the likelihood of chamomile preparations causing a contact allergy is low. However, persons with known sensitivities to other members of the Asteraceae/Compositae family (such as ragweed, daisies, chrysanthemums) should avoid topical application of chamomile or chamomile products. (Mills and Bone, 2000)

* Non-phototoxic, nonirritant

**Chemical Components:**

**Chemical Feature:** Rich in oxides (α-bisabolol oxide A and B) and the sesquiterpene alcohol, (-)-α-bisabolol

**NOTE:** There are at least four chemotypes of *Matricaria recutita* essential oil:  
1. ct. bisabolol oxide A  
2. ct. bisabolol oxide B  
3. ct. a-bisabolol  
4. ct. chamazulene

**Research Notes**

Chamazulene is an artifact formed from matricine, which is naturally present in the flowers, during hydrodistillation or steam distillation. The color of the oil determines its quality. The blue color of the oil is due to the chamazulene content which can vary depending on the origin and age of the material. (Guenther, 1952)

The CO2 extract of German chamomile maintains the matricin content. It has a fine, characteristic chamomile odor, yellow-green in color. In terms of anti-inflammatory power, there is research demonstrating that matricin has significantly stronger (10 times more active) anti-inflammatory properties than chamazulene. (Guba, 2002).
A-bisabolol is a naturally occurring sesquiterpenes alcohol which was first isolated from *Matricaria chamomilla* in the twentieth century and has since been identified in other aromatic plants such as *Eremanthus erythropappus*, *Smyrniopsis aurcheri* and *Vanillosmopsis* species. (Kamatou and Viljoen 2010)

Bisabolol is a sesquiterpene alcohol with a weak sweet floral aroma. It is very lipophilic and has a propensity to oxidize. Bisabolol exhibits antioxidant, anti-inflammatory and has been show to be a viable penetration enhancer. (Kamatou and Viljoen, 2010)

An aqueous gel with *Matricaria chamomilla* provided a higher degree of hydration and the duration was longer than the same gel with mandarin or sweet orange, although all gels provided a greater degree of hydration than the control. (Monges, et al. 1994)

The essential oil of German chamomile (*Matricaria chamomilla*) showed marked fungicidal activity against *Candida albicans*. (Aggag and Yousef, 1972)

By inhibiting the exacerbated leukocyte migration to the inflammation injury sites, chamomile could alleviate the symptoms and cope with wound healing produced by the inflammation process. (Presibella, et al. 2006)

German chamomile essential oil is well known and has been used for centuries as an anti-inflammatory agent and for alleviating the symptoms associated with eczema, dermatitis and other pronounced irritation. (Kamatou and Viljoen, 2010)

Bisabolol, a component of German chamomile (*Matricaria chamomilla*) inhibited the occurrence of ulceration induced by indometacine, stress or ethanol. The time of healing of ulcers induced by chemical stress (acetic acid) or by heat-coagulation was shortened by Bisabolol. (Szelenyi et al. 1979)

It was found that the application of (-)-a-bisabolol to a guinea pig exposed to UV light causes a decrease in skin temperature and a shortening of healing time of cutaneous burns. In fact, (-)-a-bisabolol has been shown to promote epithelialization and granulation. (-)-a-bisabolol has also been shown to have a pronounced antiphlogistic effect. Chamazulene and (-)-a-bisabolol have demonstrated antimycotic activity against dermatophytes *Trichophyton rubrum*, German chamomile (*Matricaria recutita*) is an inhibitor of 5-lipoxygenase. Alpha-bisabolol, which is widely reported to have a skin soothing action, strongly inhibited 5-LOX in vitro and essential oils containing important proportions of this sesquiterpene alcohol can be expected to inhibit it too. (Racine, P. 2003)

Chamazulene, a major component of the oil, has pain relieving, wound-healing, antispasmodic, anti-inflammatory, and antimicrobial properties; a-bisabolol, another constituent of the oil has anti-inflammatory, antimicrobial, and antipeptic activities. (Leung & Foster, 2003)
T. mentagrophytus, T. tonsurans, T. quinckeanaum and Microsporum canis. (Lawrence, 1989)

Matricaria chamomilla L., rich in guaiazulene (25.6%), (E)-b-faranesene (20.1%), chamazulene (12.4%), a-bisabolol oxide B (7.3%), a-bisabolol (7.3%) and hexadecanole (5.6%) was found to exhibit good antioxidative potential and antistreptococcal activity with S. pyogenes and S. sanguis being the most susceptible. (Owlia et al. 2007)

(-)-a-bisabolol demonstrated anti-nociceptive activity in rodents. The study showed the peripheral anti-inflammatory and anti-nociceptive activities of (-)-a-bisabolol. (Rocha, et al. 2011)

The use of a ointment with matricaria flower extract for the treatment of hemorrhoids offered the best results in amelioration of hemorrhage, itching, burning and oozing. (Schilcher, 2005)

The principal anti-inflammatory and antispasmodic constituents of German chamomile appear to be the terpene compounds matricin, chamazulene, (−)-α -bisabolol oxides A and B, and (−)-α -bisabolol. (Schilcher, 2005)

Chamomile preparations are mainly used because of their antiphlogistic, spasmylytic, and carminative activity. However, their bacteriostatic and fungistatic properties should not be underestimated. For therapeutic success, it is important to use standardized total extracts or the essential oil. (Schilcher, et al. 2005)

(-)-a-bisabolol, the bisabolol oxides A and B as well as the chamomile oil itself have a papaverine-like musculotropic spasmylytic activity. (Schilcher, et al. 2005)

Chamazulene, found in Matricaria recutita and Achillea millefolium is a pronounced anti-inflammatory compound, confirming the traditional use of these oils in inflammatory skin conditions. Matricaria recutita is of one of the key essential oils for addressing the major psychological and physical symptoms of psoriasis. (Bensouilah, 2003)

Chamomile is primarily used for tension, pain and fever, especially where the digestive tract is involved: especially for the mouth and teeth, stomach, and intestines. It is suited to conditions where there is mental and physical tension and spasm. Chamomilla is suited to conditions where wind (tension) combines with heat (overstimulation, excitation, irritation). (Wood, 2008)

**Therapeutic Actions:**
Analgesic, antiallergenic, antibacterial, antifungal, anti-inflammatory, antirheumatic, antiseptic, antispasmodic, carminative, digestive, muscle relaxant, nervine, sedative, stomachic, sudorific, vulnerary

**Keywords:**
Anti-inflammatory, sedative, stress and anxiety relieving, wound/skin healer

**Core Aromatic Applications**

**Digestive system:** stress-related digestive upset, general digestive complaints, gastrointestinal spasms, hemorrhoids (sitz baths or rectal suppositories), colic (tea with dried flowers or abdominal massage and reflex points with a 2.5% dilution), swollen gums

**Lymph and immune system:** fever (compress)

**Musculoskeletal system:** fibromyalgia, shin splints, spasm, cramps, plantar fasciitis, tendinitis, carpal tunnel syndrome, aches and pains, rheumatism, pain or swelling in joints, bursitis

**Nervous system:** nervous irritability, mild sleep disorders, headaches

**Reproductive/endocrine system:** menstrual cramps or pain, PMS, cracked nipples, postpartum anxiety, dysmenorrhea, amenorrhoea, emotions associated with menopause, perineum healing

**Respiratory system:** inflammation and irritation of the upper respiratory tract (inhalations) and lower respiratory tract (rectal suppositories)

**Skin:** inflammatory dermatosis and eczema (Blumenthal et al., 1998 / Mills and Bones, 2000), acne, inflamed skin conditions, burns, dry itchy skin, wounds, cuts and scrapes, dermabrasion
German Chamomile continued

from tattoos; reduces weeping and supports tissue healing (Blumenthal et al., 1998), bacterial skin diseases, broken capillaries, burns including radiation burns, slow-healing wounds, diaper rash, postpartum perineal healing, bedsores, psoriasis

Psyche and emotion: agitation, anger, fits, hyperactivity in children, stress-related conditions, anxiety, challenging behavior

Subtle/energetic aromatherapy: has a calm, peaceful, and healing presence; eases the tension of excessive ego-desire and the frustration, resentment, and depression that frequently follow; in Traditional Chinese Medicine (TCM), the chamomiles smooth the flow of the body’s Qi-energy. (Mojay, 1997); helps one to communicate without anger, harmful ego, or animosity and can assist in lessening emotional tension (Leigh, 2001).

Ayurveda: The flowers are bitter, pungent/cooling/pungent. Reduces Kapha and Pitta. Large dosages may aggravate Vata. It is a sattvic herb that is very balancing to the emotions. (Frawley and Lad, 2001) All types of chamomile are indicated for Pitta in excess when heat conditions involving fever, inflammation, infections and discharges such as excessive sweating. Chamomile is sweet, cooling, calming and drying. (Holmes, P. 2001)

Sample Blends with Matricaria recutita:

Post-surgical wound healing blend and to support healthy scar tissue:

Base: Calendula oil and St. Johns Wort herbal oils 5% essential oil dilution for 2 ounces
10 drops Carrot seed (Daucus carota)
25 drops Rosemary ct. verbenone (Rosmarinus officinalis ct. verbenone)
10 drops German chamomile (Matricaria recutita)
15 drops Lavendin (Lavandula x intermedia)

Sleepy time massage oil for children:
1 ounce organic jojoba oil
5 drops German chamomile (Matricaria recutita)
7 drops Lavender (Lavandula angustifolia)

Excess pitta in the form of emotional anger/aggression
5 drops German chamomile (Matricaria recutita)
3 drops Vetiver (Vetiveria zizanioides)
5 drops Lavender (Lavandula angustifolia)
Combine together into 1 ounce spritzer. Spray as needed.

Face wash for inflamed Skin
2 ounces baby castile soap
1 tbsp. aloe vera gel
1 tbsp. lavender hydrosol (L. angustifolia)
4 drops German chamomile (Matricaria recutita)
7 drops Lavender (Lavandula angustifolia)
4 drops Roman chamomile (Chamaemelum nobile)

About Jade Shutes:
Jade holds a Diploma in Holistic Aromatherapy, Holistic Massage, Anatomy and Physiology, and Reflexology from the Raworth College of Natural Medicine in Dorking, UK, and a Diploma in Aromatherapy from the International Therapist Examining board (ITEC). She has studied with Jan Kusmirek of Fragrant Studies and has completed Part One of the Purdue University Advanced Studies of Essential Oils. She has also completed a certificate program for Herbal Medicine with Master Herbalist, Erin Groh and a certificate program for Spa Bodywork with Anne Williams. She is the Director of Education for the East-West School for Herbal and Aromatic Studies. www.theida.com

References


In Sanskrit, the ancient vibrational language of India, Ayur means life and Veda means science/knowledge of; thus Ayurveda translates to the science/knowledge of life.

Summer is a time for more light, warmth, transformation and expansion. In nature, the plants are fully leafed out and flowers are blooming. The sun is at its apex in the sky offering the most amounts of light and warmth it can. Because of the warmth, lightness and dryness in the atmosphere, Pitta is also accumulating in the body, mind and emotions. Summer is the Pitta time of year in Ayurveda.

Pitta is a Sanskrit word meaning, “that which transforms.” It is one of the three doshas, or elemental combinations in Ayurveda. Pitta is a mixture of the fire element with a little bit of the water element. This mixture produces the qualities of warmth, lightness, dryness, penetrating, sharpness, transformation, subtlety, ascension and expansiveness. This language of nature is giving us the opportunity to grow, shed light on ourselves and transform, just as the flora and fauna do during this season. In Ayurveda the goal is balance. Remember: like increases like; opposites decrease. The gift in knowing what elemental qualities are present in each season is that we can adjust our daily lives to balance what nature is giving us. For example, in the summer, the atmosphere is filled with heat. We all can feel this in the warmth of the summer air and sun. What is fascinating to me is that even when we spend time in air conditioning, seemingly out of the range of the elements, there is still heat present in the energy of the atmosphere. This means that whether we are inside or outside during summer, we are accumulating heat.

In our bodies our digestive agni, or fire, becomes easily displaced by the increasing heat in the atmosphere. This action brings this fire to the surface of the skin, potentially causing skin rashes, prickly heat, and other skin inflammations. This heat can also rise up to the head causing criticism, irritation, jealousy, anger, and judgmental attitudes. In the digestive system excess heat can cause diarrhea, heartburn and acid reflux.

If Pitta is the predominant dosha in the body, which can be determined through an Ayurvedic Consultation, the person will be even more prone to these imbalances during the summer season. A true Pitta person will have a sharp intellect, be socially adept, a natural leader, and possibly be an actress or politician, and enjoy the spotlight. They will have a moderate frame that demonstrates medium proportions. They gain or loose weight easily. Their skin type is sensitive, burns easily and can be oily with copper or yellowish tones. They are often thirsty and enjoy cold drinks. Pittas also yearn for, and crave, competition and physical activity.

When a person has too much Pitta accumulation from their lifestyle, or in the presence of summer, they tend to feel easily aggravated, “hot-headed,” overly competitive, sarcastic, and are likely to experience skin rashes, diarrhea, yellow-brown tongue coating, and may comment that everyone else is “wrong, slow, and dumb.”

There are many ways to balance Pitta in the body, mind and emotions. Remembering like increases like and opposites decrease, we will naturally turn to activities, thoughts, foods, and practices that encourage coolness, rest, relaxation, heaviness, contemplation, softness and gentleness. Since Pitta (fire and water elements) can also accumulate in the eyes, digestive system, liver, skin and heart, we can...
use cooling diaphoretics on the skin such as Roman chamomile (*Chamaemelum nobilis*), coriander (*Coriandrum sativum*), lemon balm (*Melissa officinalis*) and peppermint (*Mentha x piperita*); and cooling nervines such as champa (*Michelia champaca*), rose (*Rosa damascena*), neroli (*Citrus aurantium* sp. *amara*), jatamansi (*Nardostachys jatamansi*), vetiver (*Vetiver zizanioides*) and jasmine (*Jasminum officinale*).

**Here are more ways to balance the summer heat:**

- Start the day with an intention for spiritual growth.
- Scrape your tongue with a tongue scraper. Take note of the color of the scrapings. Greenish yellow means there is a Pitta imbalance. White is excess ama, or toxins in the body. White can also mean a Kapha imbalance. Gray or brown is a Vata imbalance.
- Use a refreshing tooth powder that contains neem (*Azadirachta indica*) and peppermint (*Mentha x piperita*) on your toothbrush.
- A gentle self-massage using coconut oil (*Cocos nucifera*) or Pitta abhyanga oil (recipe below), slightly warmed to body temperature will nourish the skin and help remove excess heat. Follow the massage by rinsing with lukewarm water in the shower.

Abhyanga is Sanskrit for loving hands. Abhyanga is a loving massage that is given to oneself or another using beneficial oils and aromas to soothe the body, mind and spirit.

**Summer Abhyanga Oil**

2 oz organic coconut oil (*Cocos nucifera*)

**Add essential oils:**

- 6 drops vetiver (*Vetiveria zizanioides*)
- 5 drops lavender (*Lavandula angustifolia*)
- 4 drops rose (*Rosa damascena*)
- 3 drops champa (*Michelia champaca*)
- 2 drops clary sage (*Salvia sclarea*)
- 1 drop rose geranium (*Pelargonium graveolens*)
- 1 drop lime (*Citrus aurantifolia*)

- One to two times per week, enjoy a gentle sugar scrub to exfoliate, nourish and soothe summer skin on legs, arms, stomach, chest and back.

**Summer Sugar Scrub**

- 3/4 cup raw cane sugar
- 1/2 cup brown sugar
- 1/8 tsp fresh lime peel (*Citrus aurantifolia*)
- 1/4 cup (more or less depending on desired texture) organic coconut oil
- 25 drops lime (*Citrus aurantifolia*) essential oil

Mix well and place in a plastic jar to place in your shower.

- Walk in dew filled grass for a calm and peaceful start to your morning.
- Start your meditation and yoga practice with sitali pranayama. This is a breathing practice where the tongue is rolled into a tube and cool air is brought in through the tube and out of the nostrils.
- Do some abdominal stretches, twists and massage exercises to clear Pitta from your belly.
- Avoid excessive inverted poses in the summer months as this brings more heat into the head.
- After yoga, anoint your self with rose or vetiver on the third eye, throat and navel to keep these centers cool, calm and collected.
- Eye exercises will relax the eyes, and increase circulation that will carry away excess heat. You can also try netra tarpana, an Ayurvedic practice in which ghee is melted, placed into eyecups and put over the eyes while practicing eye exercises.
- Diet in the summer should consist of: bitter, sweet, astringent flavors. Examples of beneficial foods are:
coconut, lime, cilantro, dandelion, pomegranate, pear, lettuce, spinach, kale, most grains, beans, almonds, lean protein, paneer, ghee, turmeric, fennel, coriander and rose petals.

**Enjoy ‘Open Heart Tea’ daily**
- 3 parts fresh mint (*Mentha x piperita*) leaves
- 2 parts hibiscus (*Hibiscus sabdariffa*) petals
- 3 parts rose (*Rosa damascena*) petals
- 15 parts water

Bring water to boil. Pour over herbs, steep for 15 minutes. Strain out herbs and allow to cool. Drink and be happy!
• One should make certain to eat regular meals and lunch by 1:00 pm.
• Late night walks in the moonlight are a soothing way to bring the cool, moist energy of the moon into the body.

• Spend time in nature enjoying and swimming in a river, ocean, lake, stream, etc.

Overall, summer is the time to harness the power of the sun for expansion, growth and transformation in all areas of our lives. However, we must remember to occasionally stop and rest, go swimming, take a moonlit stroll, or nap in a hammock in order not to burn up all the sweetness that sustains us in the long haul. In other words, pace yourself and know that nature is supporting you to transform your ideas and grow your dreams.

**About Radha Crawley**
Radha Crawley is a LMT and Certified Ayurvedic Educator. Radha has successfully incorporated holistic health into her families’ lives for well over a decade. Her Ayurvedic training began at Kayakumari School of Ayurveda where she studied Ayurvedic Body therapies, Panchakarma and received her Certificate in Ayurvedic Education.

Radha will complete her Bachelor of Arts degree from Prescott College in 2013 in Holistic Health and Transpersonal Psychology. She is also honored to be currently studying with an Ayurvedic Doctor, Vaidya Mishra Bachelor of Ayurvedic Medicine (BAMS), of the Shankhya Vansya Ayurveda lineage and Maya Tiwari of Wise Earth Ayurveda®. She is the owner of Samadhi Ayurveda in spiritual Sedona, Arizona.

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The application of aromatherapy products tends to fall into two broad categories based on whether or not they are intended to be applied to the human body. Products that are NOT intended for use on the human body, such as room sprays, candles and essential oil diffusers, are considered “household products” and do not require an ingredient declaration. However, products that ARE intended to be applied to the human body, are considered to be a “cosmetics” and do require an ingredient declaration. In this article we will look at the requirements for the ingredient declaration for cosmetics.

FDA Authority
The FDA has authority over cosmetics (under the Fair Packaging and Labeling Act and the Food Drug and Cosmetic Act) and has promulgated regulations that set specific requirements for the ingredient declaration on cosmetics. The regulations cover such things as the order of the ingredients in the declaration and how the ingredients are named, as well as placement and text size.

Placement
The ingredient declaration must be placed on an informational panel (not the front panel) of the outer container. The “outer container” is the part of the package that the consumer sees when the product is displayed for retail sale. If the product is in a box, then the box is the outer container; if the product is displayed in the bottle or jar, then the bottle or jar is the outer container.

If the product has an inner container – for example, a bottle within a box – then the ingredient declaration is only required on the outer container, the box, it is not required on the inner container, the bottle.

If the product contains multiple items, as in a set of products or a gift basket, an ingredient declaration for all products must be on the outside of the container holding all the products.

Text Size
The required text size of the ingredient declaration is dependent upon the size of the principal display panel (PDP) of the package on which it is placed. The PDP is referenced in terms of square inches.

For a rectangular package, such as a box or bar of soap, the size of the PDP is equal to one entire side of the rectangle. To calculate the PDP of a rectangular package, multiply the height times the width of the full side. For example, a box for a four ounce bottle might be five inches high, two inches wide and two inches deep. The PDP is calculated as five inches (height) x two inches (width) = ten square inches.

For a cylindrical package, such as a bottle or jar, the size of the PDP is 40% of the entire surface. To calculate the PDP of a cylindrical package, multiply the height (excluding bottom, shoulder, neck or decorative or sculptured surfaces) times the circumference times 40%. For example, a four ounce bottle might be three inches high and six inches round, giving a total surface of eighteen square inches (three inches x six inches). Multiplying eighteen square inches by 40% (18 x 0.4) gives a PDP size of 7.2 square inches.
The required text size, based on the PDP, is:
• PDP less than five square inches: 1/32 inches
• PDP twelve square inches or more: 1/16 inches
The text size is determined by the height of a lower case “o” in the font used.

Order of Ingredients
The ingredients must be displayed in descending order of predominance. That is, the ingredient with the highest percentage goes first, followed by the next highest percentage, etc. Putting all the ingredients in descending order is always correct. There are, however, several alternatives allowed which can sometimes make preparing the ingredient declaration a little easier.

Ingredients at less than 1%
It is acceptable to list all ingredients that are present at less than 1% in any order following the ingredients that are present at more than 1%.

Color Additives
If color additives are used they may be listed at the end of the ingredient statement following ingredients at less than 1%, regardless of the amount used. Note, that in order to be so listed, the color additive must be on the FDA’s list of approved color additives for cosmetics.

Fragrance
Materials used as fragrance may be listed as “fragrance” without disclosing the exact components of the fragrant material used.

For aromatherapy products, this means that you have the option to list an essential oil or blend of essential oils as “fragrance” rather than specifically naming the essential oil(s). Keep in mind that it must be the exact word “fragrance” and that other wording, such as “essential oil blend,” is not acceptable. Designating some or all of the fragrant materials as “fragrance” in the ingredient declaration does not preclude you from placing information about the essential oils in the product in some other location on the package.

If “fragrance” is used, it must be placed in the correct order of descending predominance based on the total amount of fragrant material being referenced by the word.

Ingredient Names
There is some ambiguity when it comes to listing the names of botanical ingredients. The Fair Packaging and Labeling Act, which is the senior authority for labeling of all consumer products requires the use of the “common or usual name” of each ingredient. The FDA regulations require using the name assigned by the FDA, and if none has been assigned, then the name adopted for the ingredient as listed in the Cosmetic Ingredient Dictionary, 2nd edition (CFTA) also called the “INCI” or International Nomenclature of Cosmetic Ingredients, the United States Pharmacopeia, the National Formulary, the Food Chemical Codex, or USAN and the USP Dictionary of Drug Names in that order.

The 2nd edition of the Cosmetic Ingredient Dictionary lists botanicals with their common names. Subsequent editions, which are not officially recognized by regulation but have been accepted by the FDA, added the use of the Latin name. Later editions first included the Latin name in parenthesis with the common name, (Mentha x piperita) Peppermint oil, and then switched to include the common name in parenthesis with the Latin name (Peppermint oil) Mentha x piperita.

The common name of a botanical ingredient is absolutely required in the ingredient declaration. The Latin name may be included, and for aromatherapy purposes is probably an excellent idea. The presentation of the Latin and common names is a personal choice, although the industry standard is moving toward placing the common name in parenthesis.

Blended Ingredients
Where an ingredient in the product is actually a blend of two or more components, the individual components must be listed in their respective places in descending order of predominance. Unlike foods, cosmetic labeling does not allow the use of “and” to designate the components of a blended ingredient. In aromatherapy products, this most often applies to extracts or infusions that are added to a cosmetic product. In this case, the components of the infusion or extract must be individually listed in descending order of predominance.
In Summary
When preparing labels for aromatherapy products to be sold in a retail environment, and if the product is intended to be applied to the human body, a declaration of all the ingredients in the product is required, placed in such a way that the consumer can read and understand what the product contains.

REFERENCES
See the FDA website for Cosmetic Manufactures, Packages and Distributors. (http://www.fda.gov/Cosmetics/ResourcesForYou/CosmeticsManufacturersPackagersDistributors/default.htm) for links to all the regulations governing cosmetic labels.

The FDA has specified the names of eight ingredients, all of which are extremely unlikely to be used in aromatherapy products.

In 2007 the Cosmetic, Toiletry and Fragrance Association changed their name to the Personal Care Products Council.

About Marie Gale
Marie Gale is the author of Soap and Cosmetic Labeling: How to Follow the Rules and Regs Explained in Plain English and Good Manufacturing Practices for Soap and Cosmetic Handcrafters. She has been a member of the Handcrafted Soap Makers Guild (HSMG) since 1999 and is Past President of the HSMG (2004-2009). Her website, www.mariegale.com, contains additional information on cosmetic labeling and good manufacturing practices. Marie currently resides on her family’s ranch in southwest Oregon. You can contact Marie at hello@mariegale.com

If you are making handcrafted soap or cosmetics, Marie Gale’s are “must haves” for your reference library!

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We are a small company dedicated to the plants that create the essential oils and to the people who grow, harvest and distill them. We work with many small growers and cooperative distillers around the world.
Many herbs graciously lend their medicine and aroma to oil. Herbal infused oils act to extract and preserve the medicinal qualities of herbs, providing a convenient and pleasurable form of topical application. Certain constituents in healing herbs are readily extracted in oils. Examples are: volatile or essential oils, lipids, and resins. Preparing herbal oils is quite easy, especially if you follow a few basic guidelines. The first thing to remember is that oil can ferment or mold when water is added. Any water added to herbal-infused oil has the potential of ruining the oil, including water lingering on the inside of kitchen implements (pots, jars, and their lids), or water from the juices of fresh herbs themselves. For this reason, I prepare my oils from dried herbs, with a few exceptions. When I first began making herbal infused oils I would use fresh herbs and place the jars in the sun to slowly infuse, and while that worked most of the time, I ended up with a few off-batches. I switched to using partially wilted herbs with the hope of reducing the water content of the herbs, while maintaining the fresh vitality of the herb. In my experience, this method produces high quality oils over 90% of the time, but every now and then you might end up with a ruined batch of oil, which can be a sad moment indeed.

If you are new to preparing herbal medicinal oils, I recommend working with freshly dried herbs, herbs that have recently been harvested and dried. There are many herbalists who wouldn’t dream of making herbal infused oil with dried herbs; may their jars never mold and their salves be forever sweet! Seriously, there are many ways to prepare beautiful infused oils. I recommend trying the following methods initially and then you can branch out using your intuition, experience, and common sense.
Preparing an Herbal Infused Oil

There are many effective methods for preparing herbal oils. I will share my two preferred methods here. It is fine to combine multiple herbs in a single jar or pot for a specific formula rather than making separate individual oils. You can use either method alone, or you may choose to employ the maceration method, followed by the heat method. For resinous herbs, I recommend using heat to gently melt and extract the resin. Examples of resinous herbs include: calendula (*Calendula officinalis*, Asteraceae), chaparral (*Larrea tridentata*, Zygophyllaceae), poplar buds (balm of Gilead) (*Populus* spp., Salicaceae), and resins from conifers or sweetgum (*Liquidambar styraciflua*, Altingiaceae). If you need a medicinal oil right away consider the heat method as it only takes one day to complete the process.

- **Maceration Method** - Gather your herb(s) and dry thoroughly. If you are purchasing dried herbs, make sure they are fresh and of high quality. Combine the dried herb with extra-virgin olive oil in the blender, food processor, or vita-mixer so the herb is completely covered with oil and blended to a coarse texture. Aim for a coarse pesto-like texture. Blending your herbs to a fine texture will create a more concentrated oil by increasing the surface area of herb exposed to the oil. If you are buying herbs and they are already ground to a fine texture you can skip blending. Note that there are no exact measurements or proportions: this is not necessary with the topical nature of oil preparations. The oil will be more medicinal, or concentrated, if you use a higher proportion of herb to oil.

  Place the herb and oil slurry in a clean, dry, glass jar, taking care that the herb is completely submerged in the oil by one to two inches. You may need to top the herbal slurry with additional oil. Place the jar in a dark cabinet for four weeks. Exception: If you are making Saint John’s wort oil (*Hypericum perforatum* and *H. punctatum*, Hypericaceae) use freshly wilted flowers (flowers picked yesterday), do not blend, and place in a sunny window for four weeks. Strain your slurry (see instructions below) or finish your oil with the Heat Method, especially with resinous herbs.

- **Heat Method** - Blend your freshly dried or purchased herb as outlined above. Place the mixture in a double boiler. You can improvise a double boiler by nesting two pots together; or placing Mason jar bands upside down in a saucepan filled with water and setting the second saucepan on top of the Mason jar bands. The trick is to nest one pan so it is raised off the bottom of the first pan. Heat slowly and keep on low heat for four to eight hours. Do not let the oil get hotter than 110 degrees F (a little hotter than bath water). Watch closely to make sure the water does not completely evaporate and/or the oil does not get too hot. You do not want deep fried herbs!

**Straining Your Oils**

After you have prepared the infused herbal oil the next step is to strain it through a muslin cloth, or a very tight weave of cheesecloth, into a glass jar. If the oil is slightly warm, it will be easier to strain. Place the cloth into a stainless steel strainer and pour the oil/herb slurry over the cloth. After the oil ceases to run through the cloth squeeze the cloth.
with clean, dry hands to wring out any remaining oil from the herb. Add the lid when the oil cools to room temperature, and then label the jar. You are now ready to use the herbal infused oil to make a salve. Store any unused oil in the refrigerator to prolong its shelf life. Herbal infused oils will typically last two to three years when refrigerated.

Transforming Your Herbal Infused Oils into a Salve
Measure your oil into a double boiler and then bring it slowly up to 110 degrees F in the double boiler (see the notes above on making an improvised double boiler). For every four fluid ounces of oil, add one ounce grated or beaded beeswax by volume. For example, if you measure out eight fluid ounces of herbal infused oil, completely dissolve the beeswax into the oil and stir to mix the beeswax and oil together. To test the consistency of your salve, place a spoonful of the mixture into the freezer for two minutes, pull it out and test its hardness. Depending on the size of your beeswax shavings or beads, this recipe will make a softer salve. It's easy enough to adjust the texture by adding more beeswax or more oil depending on the desired consistency.

Keep in mind that harder salves will be less likely to melt in a hot car or bag, but will be more difficult to apply. While your salve is still warm, and just before you pour, you can add any desired essential oil or oils. Alternately, you can create different batches by adding the essential oil directly into the salve jar after its poured. Just be prepared to add your essential oils quickly as the salve will begin to harden soon after you pour. I use a clean dry chopstick to stir the essential oils thoroughly when I am using this method. Salves will typically last one to three years unrefrigerated. Refrigeration is not necessary but will prolong the shelf life. Vitamin E is often added to the salve mixture, right before it is poured into

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Jars, as an anti-oxidant to prevent rancidity. For every ten ounces of oil, add two capsules of Vitamin E oil, or ½ teaspoon of liquid Vitamin E oil.

**Note:** Carnauba wax, extracted from the leaves of the Brazilian palm tree (*Copernicia prunifera*, Areaceae), may be substituted for beeswax for those wishing to avoid animal products. Carnauba wax is harder than beeswax, and has a higher melting point; it must be heated to a higher temperature than beeswax to melt. You may need to adjust your proportions as well.

I recommend using a rag or paper towel and cleaning the salve pot while the residual oil is still warm. Multiple cleanings with very hot water and soap will effectively do the job.

**Appropriate Use of Oils and Salves**

Covering a large expanse of the body in salve is often not desirable. Herbs used for widespread joint inflammation or injury are typically applied as an herbal infused oil via massage. Essential oils can be diluted directly into the herbal infused oil as needed. Examples of herbal oils that are often massaged into the skin are; Saint John’s wort, arnica (*Arnica* spp., Asteraceae), and poplar buds.

The beeswax in salve helps to prolong its application on the skin, in addition to holding in moisture. This quality is especially helpful when tissues are very dry or irritated. Oils tend to rub off quicker than salve and require more frequent application. Salves are also solid and are more convenient to transport than oil, which has the potential to spill or leak.

There are situations when the application of herbal oils and salves is not recommended. Oils and salves help to hold in moisture and heat and are contraindicated in weepy skin conditions, infections and fresh burns. Avoid the use of oils and salves on poison ivy rashes, weepy eczema, pimples, boils, fresh sunburn, and fungal and bacterial skin infections. Instead, use herbal compresses, soaks, baths or poultices, which are examples of water-based applications. Also note that if oils are used as a sexual lubricant they can degrade and break most condoms.

**Traditional Topical Herbs and Their Uses**

- **Arnica** (*Arnica* spp., Asteraceae) flowers and leaves are used to alleviate arthritic conditions and heal injuries; such as sprains, muscle strains, bruising and bone breaks. Most arnica preparations sold in the store are homeopathic, but arnica prepared as an herbal infused oil is a very different medicine. Arnica oil, herbal not homeopathic, should not be used on broken skin; cuts, abrasions, or bruises with scrapes, as it can be very irritating. Herbal arnica works as a rubefacient, which means it brings more blood flow to an injured or inflamed area.

- **Calendula** (*Calendula officinalis*, Asteraceae) flowers are used topically as a vulnerary, antimicrobial and anti-inflammatory. Take care that you are using the whole dried flowers, as the medicinal resinous oils are found mostly in the involucres (the green base of the flower head). Sometimes calendula is sold as “petals,” only this is a weaker medicine for topical use. Calendula is used to speed the healing of rashes, burns, wounds, eczema, insect bites, chaffing and bruises. It is a common remedy for diaper rash and to heal sore cracked nipples from nursing, as it is safe for babies to ingest in small amounts.

- **Chickweed** (*Stellaria media*, Caryophyllaceae) leaves, stems and flowers are a cooling, soothing, anti-inflammatory and anti-itching herb. It is used to heal rashes, burns, eczema, insect bites and dry skin and lips.
**Herbal Infused Oils and Salves continued**

- **Comfrey (Symphytum officinale, Boraginaceae)** root is one of the best herbs for promoting healing of damaged tissue. It can be used on bruises, breaks, cuts, sores, and sprains. The leaf is also medicinal but the root is much higher in allantoin (primary constituent that promotes tissue growth) and mucilage. Comfrey has many contra-indications when used internally; however, these contra-indications do not apply to topical use.

- **Plantain (Plantago spp., Plantaginaceae)** leaves are anti-inflammatory, demulcent, astringent, and vulnerary. Plantain is a common weed in lawns, fields and gardens. It should not be confused with the banana-like plantain fruit (Musa spp., Musaceae) of the tropics. Plantain is used topically on insect stings, spider bites, cuts, bruises, rashes, and burns. The leaves can typically be found throughout the year and used as a fresh poultice when needed.

- **Poplar buds (Populus spp., Salicaceae)** are the resinous early spring buds from various poplar tree species. Poplar buds are wonderfully sticky and aromatic, and a traditional remedy for burns and arthritic conditions. Balm of Gilead or balsam poplar (Populus x gileadensis, Salicaceae) is a traditional folk remedy of the Appalachian Mountains. The medicinal uses of the tree were so important that mountain folks simply called it the balm tree.

- **Violet (Viola spp., Violaceae)** leaves are cooling, anti-inflammatory and soothing. The leaves are emollient (mucilaginous) and sooth dry irritated skin conditions such as psoriasis, insect bites, chaffing, and abrasions.

- **Yarrow (Achillea millefolium, Asteraceae)** flowers and leaves are anti-microbial, astringent, anti-hemorrhagic and anti-inflammatory. Yarrow is used to help stop bleeding (a fresh herb or poultice is the most effective) and tighten inflamed and boggy tissues. Yarrow helps with bruising, spider veins, hemorrhoids, and varicose veins.

**About Juliet Blankespoor**
Juliet Blankespoor is the director and primary instructor at the Chestnut School of Herbal Medicine where she teaches botany, plant identification, human anatomy and physiology, wild foods, and bioregional community herbalism. In addition, she cultivates a diverse herb garden and apothecary. Juliet also shares her plant obsession through her herbal articles and botanical photography in her blog Castanea at: http://blog.chestnutherbs.com/. To learn more about Juliet, and find links for supplies to make your own herbal infused oils, please visit: http://blog.chestnutherbs.com/links.

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Here comes summer filled with joy; the season of flourishing, blossoming, and fruition. In Traditional Chinese Medicine summer is the season of fire, the season of the heart when joy and love are on the rise. The fire element manifests as passion, expresses as laughter. The Chinese character for heart - xin - also means mind, heart/mind. A heart that is harmonious with the mind shows the way to integrity and congruent action.

But when the heart and mind get out of balance, for example when the fire element becomes excessive, anxiety can overtake joy. Excessive fire can manifest as anxiety, inflammation, and insomnia. When fire becomes deficient the body can feel irritable, sluggish with weakened circulation.

How can we support our clients whose fire is out of balance? Let’s look at three exquisite essential oils that can bring relief to the agitated body/mind/spirit.

Blue tansy (Tanacetum annum) is a beautiful oil for anxiety, helping calm agitation, harmonizing the heart/mind. Blue tansy can be applied for commonplace, and unavoidable, conditions of heart/mind disharmony when tending to heat. Diluted in tamanu oil (Calophyllum inophyllum), coconut oil (Cocos nucifera), or jojoba oil (Simmondsia chinensis), blue tansy can also relieve the itching of skin rashes and painful inflammatory conditions (1).

Rose (Rosa damascena), the Mother of All Flowers, is a gentle, calming oil that restores the heart and nourishes the soul. Steam distilled rose otto, although expensive, is preferred for topical application over solvent extracted rose absolute. Two drops of rose otto in a tablespoon of jojoba oil massaged into the heart-center region can help relieve emotional congestion and bring a feeling of well-being.

Vetiver (Vetivera zizanioides), sometimes called “oil of tranquility,” can cool an overheated mind. Distilled from the roots of a tall perennial grass, vetiver is grounding, nourishing, uplifting, and also anti-inflammatory. Use ten drops in one ounce of carrier oil to massage painful muscular and joint conditions.

Incorporating acupressure points into a massage treatment can also help to balance the client’s fire. The spirit point Heart 1 (HT1) “Utmost Source” can
reconnect us to the Divine within, the source of love of self and others. HT1 is located in the center of the axilla on the radial side of the axillary artery (be sure to avoid the artery). Next, opening Small Intestine 16 (SI16) “Heavenly Window” allows light to enter, dispelling toxicity, clearing the space to expand into joy. SI16 is located on the lateral side of the neck, posterior to the sternocleidomastoid, level with the laryngeal prominence (2,3).

Massaging a single oil or using a blend, on a point can enhance the effects. Try using one essential oil on HT1 and/or SI16. Apply it lightly at first, allowing for deeper pressure as you feel receptivity. You can also use a blend on a somewhat broader area, such as vetiver and rose together on the heart-center. Use an 8-10% dilution (1 tablespoon of carrier oil with 20-30 drops of the blend). For a whole body massage use a core blend encompassing the oil or oils you chose for the points. Limit the number of the oils used and make sure they work together synergistically. In addition, it is best not to overwhelm the client by diffusing oils in the room when using blends for your massage (4).

For yourself and your clients, you may enjoy having cooling flower or peppermint tea on hand in your massage space. To make an infusion, steep herbs in hot water for at least eight hours or overnight, then let cool. Drink at room temperature. Hibiscus (Hibiscus sabdariffa) with a sweetener such as stevia or honey can be mixed with soda water for a refreshing cooler. Chamomile (Matricaria recutita) calms anxiety and helps insomnia. Red clover (Trifolium pratense) helps thin and clean the blood, reduces histamine load, and alkalizes the body. Peppermint (Mentha x piperita), the most cooling of the mints, can soothe your stomach, increase your energy, and calm anxiety (5).

Summer is a time for blossoming and enjoying the fruits of our labor by playing outdoors, laughing with friends, and also eating from our gardens and local farms. Before evanescent summer love gives way to the letting go of autumn, we can support our own well-being, and that of our clients, by tending to the fire within, by harmonizing our heart/minds using essential oils and herbs. Summer, filled with joy.

References


About Lisa Mertz
Lisa holds a license in massage therapy and a certificate in clinical aromatherapy as well as a doctorate in cultural anthropology from the Union Institute and University where she studied spiritual healing. She serves as the program director and professor of massage therapy in a brand new community college program near Niagara Falls, NY. Lisa has been studying and practicing bodywork and energy work since the early 1980s, and for the past dozen years, her focus has been on hospital-based oncology massage. You can contact Lisa by emailing her at lmertz@me.com.
NAHA believes in promoting and elevating true aromatherapy through the active dissemination of educational material.

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Are You Using Visual Content in Social Media?

by Liz Fulcher

Visual marketing is a huge online trend and gaining in popularity, especially in social media. Why? Because marketing content with images gets more audience engagement. Engagement can be in the form of comments, follows, and leads - even new customers!

What is Considered ‘Visual Content’?
Visual content is pretty much what it sounds like: content that isn’t straight text.

It can be in the form of:
• Photographs
• Word Art
• Videos
• Infographics
• Quotes accompanied by images
• Charts and graphs

Why is Visual Content so Effective?
Speed is the name of the game with social media, and people respond to images quickly. Our brain processes visual information faster than reading text, so images communicate an idea in seconds. Most people are overwhelmed with social media and have little time to read long passages of text, so it’s important to get your message across quickly and efficiently: images do just that.

In fact, social media posts with visual content get 120% to 180% more engagement than text-only posts. You only have to look at the enormous popularity of Pinterest and Instagram to understand the popularity of including images. Facebook, the social media trendsetter, changed to the Timeline format to make content more visually-oriented. When I started adding visual content to my social media efforts, especially Facebook, my own audience engagement rose quickly. I noticed more comments, likes and shares and requests for my newsletter.

I like to think that visual content is to social media what the ‘coffee table book’ is to our living room - a good old-fashioned conversation piece. It gives your audience something to talk about.

What Makes Good Visual Content?
Anything that engages, entertains, or informs your audience makes great visual additions to your social media content. Post pictures of things that have to do with your aromatherapy work, niche, or relate to your favorite hobbies. This keeps it personal. Try to strike a balance between informing and entertaining to keep your fans interested.
Creating Visual Content is Easy

Students and colleagues often tell me that they can’t make visual content because they don’t have design skills. That’s why I love online design tools, especially the free ones! They make it easy for anyone to create original images with little skill. When an image is created by someone, and consequently shared, it resonates as having been made by someone who really wants to connect with his or her audience. Remember, in social media, it’s about being authentic and showing your human side.

Visual Content Suggestions

1. Photographs
Photos are a great way to allow your audience to know you better, especially when you use your own pictures. Stock photos from companies like Shutterstock or Dreamstime work well on your website and blog, but for social media, keep it informal. Make them uniquely yours and fun. Let your fans see what you look like in real life, not sitting for a portrait. The more personal and ‘real’ your photographs, the more your audience will respond with trust.

Ideas:
- Newspaper stories about your accomplishments
- Make a collage of your products in your shop
- Have someone take your pictures at a trade show or while giving a talk
- Photos of “Behind-the-Scenes,” which show how your company operates, are very popular: for example, cutting bars of artisan soap or adding labels to your aromatherapy bottles

Ask your audience to generate visual content for you by requesting they take pictures of them using your products. Remember to give them credit!

2. Graphics
Graphics are easy to create. You simply layer text over a plain background or uncomplicated photograph. I made the lavender image in about 10 minutes and the yellow image in less than 5 minutes.

Ideas:
- Add your mission statement to a soft background
- Share an essential oil recipe
- Offer an aromatherapy tip
- Share an inspiring quote

3. Infographics
Take information you’d normally present in a long passage of text and turn it into an infographic. An infographic is a visual representation of a message that can be understood at a glance. This gives your audience another way to consume, and quickly understand, the concepts that you’re trying to convey. Here’s an infographic by Rick Mann explaining why they are effective.
If you’re considering implementing infographics of your own, I suggest you work with an artist or graphic designer.

4. Videos

There is plenty of software on the market making it easy to shoot, edit and publish videos quickly. I’ve even made videos with my iPad. Keep your videos short and simple, and demonstrate something that is best communicated through action. Step-by-step and how-to videos are enormously popular. Just be yourself and have fun and your audience will love you, even if you stammer or make a mistake.

Ideas:
• Demonstrate ways to use your products like applying artisan perfume to pulse points or using a vibrational spray to clear someone’s energy field
• Break down a simple activity into steps that you can demonstrate in under 5 minutes, like adding essential oils to hand soap or filling a roll-on tube
• Share a behind-the-scenes look at your product being created
• Post clips of you giving a lecture or teaching a class

Fun and Helpful Tools

The list below is the tip of the iceberg when it comes to photo editing tools. There are many free programs and services that let you create and edit visual content. Look for programs with trial versions and free services before paying for a premium, and make sure the tool is easy to use and has the features you need. Software can be expensive so make sure it’s worth it.

• PicMonkey.com is a free photo editor with which you can alter uploaded photos, add text, use fun filters and add other images.
• Pinwords.com is somewhat limited. However, it is still a fun, free tool where you upload your own photos and add text.
• Pinstamatic.com is a tool for helping you add text, locations, music and more onto your Pinterest boards.
• MorgueFile.com is a site where you can find free photos.
• Url2pin.it can be used to create and share screenshots of websites and blogs within seconds.
• Instagram.com - the most popular image editing and sharing app today, this tool edits and allows easy sharing on social media sites.
• Tagxedo.com I love this one! Type in your website address and it creates an image using words from your site.
• Snapito.com is another screenshot tool that works
with both main web pages and specific URLs.

• Pixlr.com is a free photo-editing app for Mac or PC.
• Pixlr-o-matic.com is a free photo editing app for Android. You can share immediately to Facebook.

Getting Started
Now that you have some ideas for the types of visual content you can create, it’s time to add them to your social media platforms.

Your next steps:
• Search for visual content that is relevant to your market
• Decide which type of visual content will be easiest for you to create
• Identify visual content tools you’d like to try first
• Draft a schedule for when you will create your visual content
• Set aside time to learn at least one new visual content creation tool every month

Here is a list of some recommended reading materials to learn more on using visual content:

1. Visual Social Media Marketing (new book) by Krista Neher
2. 3 Tips for Creating a Social Media Image Strategy by Terry League
3. The Importance of Developing a Social Media Image Strategy by Alexandra Reid

About Liz Fulcher
Liz Fulcher is a Clinical Aromatherapist, Essential Oil Educator, Speaker, and Writer with over 21 years experience working with essential oils. Also known as “The Fragrant Muse”, Liz specializes in empowering others to succeed in their own aromatherapy practice. She owns the Aromatic Wisdom Institute, School of Creative Aromatherapy in Selinsgrove PA. To learn more about Liz, please visit: www.aromaticwisdominstitute.com
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In this article I will share some basic aromatherapy botanical blends and helpful tips that can be useful for keeping your animal friend’s calm and cool in the summertime.

If you have made it through the bug-biting season of spring, don’t let your guard down just yet. Summertime brings another health concern to keep an eye on, especially with your animal friends. Summer shines forth with her strong sun-energy, giving us a time to rejoice in the added warmth she provides. Yet too much of this heat can cause issues for both people and their pets, in particular: over exposure to the heat, heat stroke, headaches, nausea and sunburned skin.

Most animals love the warmth of the sun rays. You may notice that your cat can bask for hours in her favorite sun spot, and your dog can’t seem to get enough of Frisbee play in the park. The horses are sunning themselves in an open field, or rolling in the hot dry earth of their pasture, followed with a full-body shake creating a dirt dust cloud. They all seem to have found pure bliss!

The added warmth provided during the summer season can be helpful for those that suffer from arthritic type issues, such as stiff muscles and joints, and poor circulation. Coming out of a moist springtime, which can add to the overall body stiffness, the summer season helps to warm the body’s meridian channels and renew energy useful for increasing circulation and decreasing pain and inflammation. The joyful sensation of less pain can often lead to spending too much time, and fun, in the sun, with the end result of a weekend warrior syndrome; sore body, sunburned skin, over-heated system, and for some, headache, nausea and heat or sun stroke.

Most dogs know the art of play all too well; some will even forgo a favorite yummy treat verses giving up the ball. Dogs sweat via their paw pads, and regulate their overall body temperature by panting. It’s up to us, their caregivers, to know when the animal needs a break from the heat. We may feel tempted to go for a horseback ride on such a sunny summer day, but remember that the horse is the one doing most of the work, and if the trail does not offer natural shade most of the way, then opt to give your horse a nice cooling bath and schedule a ride on a cooler day. If your animal friend is over weight, out of shape, has an existing respiratory disorder, or has difficulty breathing due to allergies, excess weight, or COPD symptoms, you will want to be even more vigilant in observing any issues that may arise due to exposure to heat, humidity and exercise.

In Traditional Chinese Medicine (TCM) theory, the two most active meridian channels in summertime are the Heart (HT) Meridian and Small Intestine (SI) Meridian. Both are considered Fire Elements in Five Element Theory (a branch of TCM), as well as the Pericardium Meridian (Protector of the Heart) and the Triple Warmer Meridian (helps balance the body’s inner and outer temperature). It is important to keep the Heart Meridian Channel regulated and cool during excess heat conditions, and to support the Small Intestine Channel with healthy regular bowel movements to prevent toxins from absorbing
and building up in the body’s system. Excess heat in either of these channels can contribute to health issues such as heart palpitations, circulation issues, difficulty breathing, constipation and bowel upset. Observe your pet’s stools to make sure they are not dry. There are specific foods that are useful for excess heat conditions of the body. Check with your local holistic veterinarian who specializes in acupuncture, holistic lifestyle and natural diets for animals. Working with your holistic veterinarian on a natural food regime for your pets will also go a long way in overall health and wellbeing.

Emergency Acupoints for Keeping Cool & Calm:

**Governing Vessel (GV26):** shock, trauma, disoriented, fainting, collapse (located just below the nose, between the nose and the upper lip area)

**Heart (HT9):** disoriented, restore consciousness, overheated (located on lower front leg/paw area near the toes)

**Pericardium (P6):** overheated, palpitations, anxiety (located on the lower front leg/paw area near the ankle region)

**Triple Warmer (TW1):** convulsions, overheated (located on lower front leg/paw area near the toes)

Apply light pressure with your thumb or pointer finger to the acupoints for approximately seven second intervals. Do not over-stimulate these points during excess heat conditions. In the case of shock, apply moderate pressure to GV-26 point, along with an ice cube to the acupoint area. The Bach flower essence known as Rescue Remedy can also be applied to the acupoints.

For those that are not already familiar with acupuncture/acupressure techniques, you will not be able to find the exact acupoint location without having a chart (1,2) to reference; however, working as close as possible to each acupoint location, along with application of hydrosols, will be helpful. Practice finding the acupoints locations and applying light pressure to familiarize yourself and your animal friend to acupressure.

Aromatherapy Blends Useful for Keeping Cool & Calm:

Hydrosols are a gentle way to incorporate aromatherapy for use with your animal friends.

Hydrosols also offer an alternative to the more potent essential oils. You can also make hydrosol ice cubes to apply to the skin to help decrease heat and inflammation, soothe sunburned skin, and calm bug bites/stings.

The following recipe blends are for use with dogs and horses. Avoid use with cats.

Blends are for topical use only. If irritation occurs, discontinue use. Do not get in or near eyes, ears, nose or genital areas. Use caution with any of the citrus essential oils with animals who will be outdoors, and exposed to sunlight. It is best to use these types of essential oils for use in a diffuser, and with inhalation.

This list of essential oils and hydrosols are known for their cooling, calming and balancing properties. Create a blend for use in a diffuser, inhalation, or mixing with aloe vera gel for topical application to meridian acupoints. Consider using hydrosol ice cubes on acupoints. Ice cubes can be placed into a paper towel or wash cloth if they are too cold for your animal friend. You can also use mini paper cups to

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freeze the hydrosol/water mixture. These cups are easy to use for topical application and cooling the body with all over massage.

**Keep Cool:** peppermint (*Mentha x piperita*), spearmint (*Mentha spicata*), and clary sage (*Salvia sclarea*).

**Stay Calm:** sweet orange (*Citrus sinensis*), tangerine (*Citrus reticulata* var. blanco), neroli (*Citrus aurantium* var. *amara*), lavender (*Lavandula angustifolia*), and sweet marjoram (*Origanum marjorana*).

**Be Balanced:** grapefruit (*Citrus paradisi*), lavender (*Lavandula angustifolia*), vetiver (*Vetiveria zizanioides*), and ylang ylang (*Cananga odorata*).

**Cool Carriers:** Aloe Vera Gel, Distilled Witch Hazel, Apple Cider Vinegar, Black Tea and Hydrosols.

Aloe Vera gel is cooling and soothing to the skin, and useful for application to animals, especially those who are outdoors. Witch Hazel can be used for a natural rub down after exercise and helps to cool and balance the body’s temperature. Apple Cider Vinegar (ACV) can help to restore the body’s natural pH, and is refreshing to hot skin. Black Tea (brewed and cooled) is a natural way to soothe sunburned skin and cool the body. Hydrosols are useful for all of the above and are a gentler option for use with our animal friends.

**Body Mist Cooling Spray:**
Mix the following ingredients together in an aroma-safe mist spray bottle. Shake well before use:

- Brewed Black Tea (cooled): ½ cup
- Hydrosol (lavender): ½ cup
- Distilled Water: 1 cup

Mist spray as needed for sunburned skin and to cool body temperatures.

This blend mixture can also be pre-made and kept in a glass jar in the refrigerator for approximately 1-2 weeks. Discard if moldy.

**Aroma Aloe Vera Cooling Gel:**
Mix the following ingredients together in an aroma-safe jar. Shake well before use:

- Aloe Vera Gel (6 ounces)
- Hydrosols (1 ounce of peppermint and 1 ounce of lavender)

Apply gel as needed for sunburned skin and to cool body temperatures. This gel is also useful for bug bite relief.

**Tips & Tools for Keeping Cool:**
- Avoid exercise or strenuous movements during peak heat times of the day (generally considered as 10:00 a.m. through 3:00 p.m. as the hottest times of the day).
- Provide pets access to ample shade and retreat from the heat at all times.
- Avoid traveling or trailering animals in very hot temperatures.
- Do not leave pets unattended in a vehicle or trailer at any time, but especially during any type of warm and hot weather.
- Always have fresh water available for all animals (be sure to provide clean water, stagnant water can become polluted and a breeding area for mosquitoes).
- Outdoor hose hookup for cool water rinsing (this could save your pet’s life).
- Premade ice cubes and ice bag access (use a Ziplock bag if need be).
- Large bucket for hoof and paw cool water soak.
- Baby pool for cool water soak (most dogs love to cool off in a baby pool or stand in running fresh water stream). Be sure to have a pool guard on watch at all times, especially if small pets and children will have access to the pool/water areas.
• Varied sizes of cotton towels (these can be immersed in cool water, rung out, and placed onto the animal’s back/neck/chest and abdomen areas). Especially useful with cats, who are not big fans of a baby pool or paw soak!

• Mist spray bottles for cooling body mist spray recipes.

• Use a natural paba/zinc-free sunscreen for dogs and horses that have thin skin/hair.

• Quick access to: veterinarian’s emergency phone numbers (plan ahead, most emergency type issues tend to happen on a weekend or holiday. Be sure to have your veterinarian’s contact information on hand at all times, and be aware if he/she is not available during off hours/holidays, if so, have an alternative veterinarian emergency hospital/center contact information).

Watchful Eye: During the summer, keep an eye out with your animal friends for the following clinical signs and symptoms (listed below) associated with excess heat in the body from too much exposure to the sun/heat/humidity, heat exhaustion (hyperthermia), and worse, heat stroke; which requires immediate veterinarian medical attention.

• Restlessness/Lethargy
• Difficulty being still, Pacing
• Difficulty Breathing (especially if a respiratory condition is pre-existing)
• Increased Panting, Excess Salivation and Drooling
• Increased Respiratory Rate and Rapid Breathing
• Increased Heart Rate and Pulse Rate
• Nausea, Vomiting
• Redness of the Tongue/Mouth areas
• Body Weakness, Trembling, Unable to Stand, Stumbling

Important Note:
Do not delay in contacting your veterinarian emergency animal center immediately when it comes to a serious issue like heat stroke, especially since time is of the upmost importance in saving your animal friend’s life! Ignoring the symptoms and ‘waiting’ to see if it will get better, can lead to major health concerns and issues such as; gasping for air, seizures, collapse, coma, and even death.

Disclaimer: The information contained in this article is for educational purposes only and is not intended to diagnose or take the place of professional health care. Please check with your veterinarian if your pet has any health issues or concerns.

References:
(1) Animal Acupoint Meridian Charts and Books, Tall Grass Publishers.
(2) Schwartz, Cheryl Dr., DVM, Four Paws; Five Directions, Celestial Arts Publishing, 1996.

About Kelly Holland Azzaro
Kelly Holland Azzaro is a Registered Aromatherapist, Certified Clinical Aromatherapy Practitioner, Certified Bach Flower Practitioner, Licensed Massage Therapist, Reiki Practitioner, and Past Vice President of National Association for Holistic Aromatherapy (NAHA) and current Past President of NAHA. Kelly has over 20 years professional experience in holistic aromatherapy and massage therapies for both people and their pets. She offers NCBTMB (National Certification Board of Therapeutic Massage & Bodywork) continuing education courses in Animal Aromatherapy and Flower Essences. Kelly is the Founder and Director of The Holistic Animal Association Network—‘Supporting the Holistic Healing Arts for People and Their Animal Friends.’

Kelly, and her husband Marco, who is a Licensed Acupuncturist and Qigong Practitioner, have a Holistic Healing Center in the Blue Ridge Mountains of North Carolina. To learn more please visit our websites at: www.ashitherapy.com or www.holisticanimalassociation.com
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Aroma Acupoint Therapy, or AAT as we like to call it, is a gentle completely safe and yet profoundly effective treatment modality that utilizes the energetic potential locked within pure essential oils. Treatment involves placing particular oils on specific acupoints or reflex zones on the body in order to trigger energetic changes in the individual that will bring him or her back to a state of balance. Aroma Acupoint Therapy works on the basis of mutual resonance through the systematic and intentional combination of essential oils and acupoints, resulting in a more significant clinical effect than using either of these treatment methods alone.

How Aroma Acupoint Therapy Works:
How does Aroma Acupoint Therapy work? The basic premise is that essential oils, being energetically just as active as acupuncture points, have the ability to stimulate the points in a similar way as needles. However, the difference between them lies in the fact that unlike acupuncture needles, essential oils are also able to provide a content of information to the point that will suggest a particular type of therapeutic action. The basic aim is always to select an oil that possesses the same function as an acupoint, an oil that will activate a particular point function.

Geranium oil (Pelargonium capitatum), for instance, is a female hormonal regulator in women with reproductive weakness. It is a perfect match for points such as SP-6 (Spleen 6) and CV-4 (Conception Vessel 4), as these points have the same function. However, geranium is also a mucostatic agent that has the effect of helping to dry up vaginal discharges and, as such, is appropriate for application onto points such as CV-6 and SP-10 in women with a damp or congestive condition in the pelvis.

Conversely, because each acupoint has more than one action, there are several oils that could potentially be used with it as the situation would demand. An important acupoint such as CV-17, at the center of the chest, can be oiled with a nervous system sedating oil such as marjoram (Origanum majorana) or helichrysum (Helichrysum angustifolium), as this point has a good calming effect on the whole system. It is often used in states of acute anxiety and agitation, especially when there is an emotional component present. Equally however, CV-17 can be oiled with respiratory restoratives and stimulants such as Siberian fir (Abies sibirica) and Black spruce (Picea mariana) to enhance the point’s excellent tonifying and strengthening effect on the lungs and bronchi. This type of combination is highly beneficial in individuals with constitutional lung weakness, in chronic respiratory infections or for states of grief. These are all conditions where lung energy is weakened and will benefit from this powerful oil-point synergy. In all of these cases the essential oil is able to effectively, and safely, engage and amplify a particular acupoint function.

The mechanism of action at work here is unproven, as Aroma Acupoint Therapy is a very new modality. Still, there are several theories that would help explain the body-mind’s often immediate response to oil-point treatment, as well as this therapy’s long-term effectiveness. One theory is that the oils are able to activate peptides connected with the points that,
through the meridian energy pathways, transmit the suggested action to specific target tissues, organs, and so on. The simplest explanation however, is the universal principle of reciprocal resonance. Oils and points possessing a similar quality and function will energetically resonate with each other and create a particular sonic vibration. This would be the same as the sound created when a peptide docks into a receptor site. This is essentially how a therapeutic effect is achieved.

The Aroma Energetics of Essential Oils:
The basic framework for the use of essential oils in Aroma Acupoint Therapy is a clinical, empirical model of the energetic properties of essential oils based on their aromatic qualities. The oils are broadly divided into high, middle and base tones, corresponding to their rising, circulating and sinking energetic movements, respectively. Within these movements lie the specific categories of their aroma qualities, such as Pungent-Fresh, Pungent-Spicy, Green-Sweet, Green-Lemony, and so on. Rosemary oil (Rosmarinus officinalis), for instance, is a Fresh-Pungent oil with secondary Sweet and Green qualities.

Every aroma category has specific energetic and functional properties that all oils belonging to it have in common. So, Fresh-Pungent oils are generally stimulating, energizing, uplifting, awakening and warming. They are used in weak, cold and damp conditions with their typical symptoms of fatigue, cold extremities, etc. (see below). Roman chamomile (Anthemis nobilis), for example, belongs to the Green-Sweet oil aroma category and is usually chosen for its cooling, relaxing, pain-relieving and centering effects that are typical of this category. Within an oil’s group function then lays its own separate functions, which span specific physiological actions, psychological functions through to spiritual functions. Any of these functions may be engaged during treatment.

The Treatment Sequences:
Aroma Acupoint treatment consists of just one or two drops of an essential oil being lightly applied to the acupoint with a finger or cotton swab and held in place for a short amount of time. The practitioner will select one or more treatment sequences or patterns that typically involve activating between three and eight points. In the context of bodywork, this may be followed and/or introduced by massage, deep tissue work, etc. In the context of acupuncture, this may be optionally followed by needling the points. Although Aroma Acupoint Therapy lends itself beautifully to being used alongside these other types of treatment, it does not rely on these for its effectiveness, and successfully stands alone as a method of treatment.

The practitioner will choose to perform one or more treatment sequences per session. These are named after the most prominent symptom in the pattern, e.g. Racing Mind, Neck and Shoulder Tension, PMS with Heat, Emotional Withdrawal, and so on. They are organized according to an underlying syndrome of energetic or functional imbalance. The treatment sequences are specific to modern day patients, their health concerns and their disorders. They are particular to what we actually see in the Western clinic day in and day out. Once the practitioner gains greater experience and comfort with the treatment patterns, he or she will know when to modify the
pattern to give a more individualized, client-tailored treatment. On the basis of increased knowledge of the oils on one hand and the acupoints on the other, she may select other point-oil combinations appropriate to the treatment.

Evaluating the symptoms with which the client presents is performed using the Six-Condition diagnostic assessment, a user-friendly diagnostic system that Peter Holmes developed over many years of practice and research into the diagnostics of traditional Chinese, Greek and Ayurvedic medicine – the three extant world systems of energetic medicine. The symptoms may be mental, emotional or purely physical and form syndromes of energetic imbalance. The main axis of imbalance seen in our society is the axis of the Tense-Weak conditions, which is based on hyper- and hypo-functioning of the nervous system. Commonly seen are symptoms of imbalance between the Hot-Cold axis, based on hyper and hypo-functioning of the body’s warmth-circulatory system; and the Dry-Damp axis, based on tissue hydration and fluid balance.

The symptom evaluation itself includes not only what the client reports but also an assessment of her facial complexion, skin quality, muscle tone, breathing, voice, pulse quality, physical movement, likes and dislikes as regards to food, drink, climate, and so on. All of these symptoms together tell the practitioner the nature of the imbalance in terms of the Six Conditions and will point to possible treatment patterns. Once treatment is underway, the practitioner will monitor its effectiveness by looking for positive signs of change in the client’s complexion, the brightness of their eyes, sound of the voice and improvement of the pulse quality, as well as improvement of actual symptoms. It is not unusual to find improvement in all of these diagnostic parameters by the end of a successful treatment and, in some cases, very soon after all the oils have been placed. The pulse in particular can respond very quickly to the rebalancing effect of oils applied to a judicious selection of points. This is because the pulse registers the functional changes taking place in the vascular autonomic system.

Origins:
The origins of Aroma Acupoint Therapy goes back to Peter Holmes’ acupuncture practice in the 1980s when he became involved with Aromatherapy as it developed in England. Realizing that essential oils were just as electromagnetically powerful as acupuncture needles, he began experimenting on patients by placing a drop of oil on a point instead of stimulating it with a needle. Many years of experimentation and observation then led Peter to develop the experiential model of aroma energetics for the essential oils described above. Since the early 1990s this model has formed the foundation for understanding the inner, or energetic, nature of essential oils and their effects on body and mind. It is the cornerstone today of the energetic approach to using the oils in Aroma Acupoint Therapy.

In 2010 Peter began collaboration of his essential oil work with Tiffany Pollard, a practicing acupuncturist and body worker. Tiffany’s multi-practitioner clinic in Washington allowed for the use of the oils on a much greater scale than ever before, involving their consistent use in treating up to 75 patients a week. This intensive, ongoing exploration of the clinical actions of essential oils rapidly generated a large pool of clinical experience that eventually led to the creation of the first Aroma Acupoint Therapy workshop in September 2011.

Clinical Examples from Tiffany Pollard’s Practice:
AAT is hands down my most valuable tool in clinical practice. Treating hundreds of patients per month has served to validate, on an ongoing basis, the effectiveness of this powerful modality. I would like to provide you with just a few examples of how I
use the essential oils in my day-to-day work with patients.

Let's look at saro oil (*Cinnamosma fragrans*) first. This opening and lifting high tone oil falls into the Fresh-Pungent category and, as such, we see that it pairs well energetically with acupuncture points on the upper part of the body. In addition, it has a particular affinity for the Lung meridian. We have several sequences in AAT that maximize the effects of this oil in treatment. But generally speaking I often pair saro oil with the acuponit LU-1 (Lung 1) in order to resolve grief, dissolve a sense of disconnection to life, rekindle inspiration, and open one to receive. I pair this with Blue tansy (*Tanacetum annuum*) on LIV-14 (Liver 14) to open the diaphragm and facilitate the reconnection of aspiration to inspiration. This is a profound treatment that can help people see beyond obstacles (at times this often shows up in our ways of thinking), and move forward propelled by renewed hope.

Blue tansy (*Tanacetum annuum*) is another oil that I use almost daily in my practice. This is a middle tone oil with a wonderful Sweet-Green aromatic quality. It has the ability to both harmonize and move stagnation, particularly as it relates to the Liver meridian. Applying Blue tansy to LIV-3 and GB-34 (Gall Bladder 34) is commonplace in my clinic. We see that this oil-to-point combination helps resolve stuck anger, smooth one through frustration, encourage flexibility in life and resolve pain caused by stagnation and inflammation.

An oil from the Woody and Rooty category I want to highlight is vetiver (*Vetiveria zizanioides*). This viscous and grounding oil, when paired with the right acupoints, has the power to clear heat from the upper body (including hot flashes and night sweats) and stabilize symptoms such as anxiety with ungroundedness, an inability to focus, and insomnia with a racing mind. Foot and ankle points pair best with vetiver, and the combinations I use most frequently include use of K-1, 5 or 6 (Kidney 1, 5 or 6), BL-60 (Bladder 60) and GB-41.

AAT opens up an entire world of treatment possibilities by engaging the energetic functionality of the essential oils together with the potency and potentiality of the acupuncture points. Practitioners who study AAT report that they are able to go into the clinic the day after a workshop and begin seeing profound results right away! The diagnostic understanding of the Six Conditions, paired with knowledge of Aroma Energetics allows essential oils to be potent, non-invasive treatment allies. And as a gratifying bonus, patients generally love the aromatherapy that they receive!

**About the Aroma Acupoint Therapy Practitioner Training:**

Peter and Tiffany offer practitioner training at several different locations throughout the country. These practical workshops are appropriate for anyone already practicing a form of bodywork, including acupuncture, chiropractic, etc. The training consists of Level I, II and III and includes hands-on practice and lecture instruction. Level I introduces the important basic concepts of aroma energetics of essential oils, Six Condition client assessment and numerous treatment sequences for a variety of
physical, emotional and mental conditions. Equal time is spent on lecture and on practicing the treatment sequences, involving locating and oiling the points. Levels II and III go into more depth with all of these aspects, with emphasis on exploring the inner nature of the oils and the acupoints.

To find out about current workshops offered, please go to: http://www.snowlotus.org/snowlotus-seminars.aspx.

About Peter Holmes
Peter Holmes LAc, MH directs Snow Lotus Seminars and teaches Aroma Acupoint TherapyTM workshops together with Tiffany Pollard. He has authored several textbooks on herbal medicine, both Western and Oriental, as well as a book on essential oils.

http://www.snowlotus.org/
Contact: peter@snowlotus.org

About Tiffany Pollard
Tiffany Pollard LAc, LMP teaches Five-Element acupuncture at Bastyr University in their Chinese Medicine masters degree program and co-teaches Aroma Acupoint TherapyTM workshops with Peter Holmes. She directs Synergy Wellness Center in Kirkland, Washington, a holistic clinic that focuses on energetic medicine and bodywork, offering a synergy of different treatment modalities in the field of complementary medicine.

http://www.thesynergywellnesscenter.com/
Contact: Tiffany@thesynergywellnesscenter.com

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Issue 55 ‘11
**Kelly’s Aromatherapy Blends**

**Bug Repellent Blend:**
Blend the following essential oils with 4 ounces of aloe vera gel:

**Add Essential Oils:**
20 drops eucalyptus (*Eucalyptus citriodora*)
10 drops lavender (*Lavandula angustifolia*)
10 drops geranium (*Pelargonium graveolens*)
12 drops catnip (*Nepeta cataria*)

**Bug Bite Relief Blend**
Mix 1 drop of helichrysum (*Helichrysum italicum*) and 1 drop of lavender (*Lavandula angustifolia*) essential oils with one teaspoon of aloe vera gel and ½ teaspoon of green clay, mix with enough witch hazel to create a topical paste to apply to bee and wasp sting welts. If you do not have any natural clay on hand, opt for calamine lotion (pink calamine works better for bug bites).

Apply topically as needed. If irritation occurs discontinue use. Keep out of reach of children and pets. Both blends can be used with dogs and horses, avoid use with cats.

**Annette’s Aromatherapy Blends**

**Mosquito Repellent Spray:**
4 oz Spray

**Essential Oils:**
100 drops citronella (*Cymbopogon nardus*)
100 drops lemongrass (*Cymbopogon citratus*)
100 drops eucalyptus (*Eucalyptus citriodora*)

300 drops coconut emulsifier or other emulsifier of choice. Fill the balance of a 4 oz bottle with distilled water. Shake well before use. Re-apply every 1-2 hours.
Natural Bug Repellent and Bug Bite Relief Blends continued

4 oz Bug Repellent Lotion

**Essential oils:**
- 100 drops citronella (*Cymbopogon nardus*)
- 100 drops lemongrass (*Cymbopogon citratus*)
- 100 drops eucalyptus (*Eucalyptus citriodora*)

Fill the balance of a 4 oz bottle with lotion and mix well. Re-apply every 1-2 hours.

**Caution:** Citronella and lemongrass essential oils can cause skin irritation in sensitive individuals. Spot test to check for reaction before applying.

**Sharon’s Aromatherapy Blends:**

**Insect Bite After Care Lotion**
2 oz unscented white lotion

**Essential oils:**
- 8 drops geranium (*Pelargonium graveolens*)
- 10 drops tea tree (*Melaleuca alternifolia*)

Apply to the skin on the affected area.

**To Repel or Soothe Insect Lotion**
0.5 oz unscented white lotion
2 drops geranium (*Pelargonium graveolens*) essential oil

Apply a small amount on the affected area. This blend, at this dilution, is suitable for children. It is simple but effective, based on my experience – and children seem to like the rose-like scent!

**Jade’s Aromatherapy Blends:**

**Mosquito BE GONE Spray**

**Essential oils:**
- 25 drops cedarwood (*Cedrus atlantica*)
- 25 drops patchouli (*Patchouli cablin*)
- 15 drops geranium (*Pelargonium graveolens*)
- 25 drops Eucalyptus citriodora
- 10 drops Peppermint (*Mentha x piperita*)

Fill the balance of a 2 oz bottle with water and shake well before applying. Re-apply every 2-3 hours or after getting wet.

**Big Bite Relief Gel**
2 ounces aloe vera gel
1 tbsp lavender hydrosol
1 tbsp calendula or plantain herbal oil

**Essential oils:**
- 10 drops Cape chamomile (*Eriocephalus punctulatus*)
- 20 drops Lavender (*Lavandula angustifolia*)

Mix all ingredients together until well combined. Apply to the irritated area of skin. Can be used as often as needed.
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Amrita is the only certified-organic aromatherapy company in the U.S. Amrita is run by therapists for therapists. NEW certified-organic oils: Himalayan Cedar, Lemongrass, Citronella, East Indian Sandalwood, Vetiver and much more. Certified-organic perfumes. All oils GC verified. Can supply any oil in a certified-organic version upon request. Now in its 23rd year, Amrita was founded by master aromatherapist Dr. Christoph Streicher. Full line of nebulizing diffusers. 100% natural, chemical-free skin care.

http://amrita.net/

Arlys Naturals
ARLYS specializes in 100% pure essential oils, absolutes, synergies, hydrosols, carrier oils and more for the novice to the professional. An “aromatic oasis” for the senses as you shop for professional grade natural skin and body care products, diffusers, herbal teas, books, soaps, music, perfumery, and supplies. All distinctive aromatherapy products to enhance your health and well-being. Sign up for our free online monthly newsletter. Online Catalog Only. Retail/Wholesale

www.ArlysNaturals.com

Aromatics International
Visit www.AromaticsInternational.com to find essential oils and a wide variety of hydrosols that are either organic, unsprayed or wild crafted. We are a small company dedicated to the plants that create the essential oils; and to the people who grow, harvest and distill them. We work with many small growers and cooperative distillers all around the world. We buy in small quantities to preserve freshness. Every batch of oil is tested with GC/MS analysis.

www.AromaticsInternational.com

AromaWeb
AromaWeb provides over 450 pages of essential and carrier oil profiles, a vast aromatherapy article library, recipes, book reviews and directories of aromatherapy retailers, wholesalers, educators and distillers. Over 3.5 million page views annually. AromaWeb can play a powerful role in promoting your business. Reach thousands of consumers, aromatherapy enthusiasts and professionals. Advertising opportunities available. NAHA Members: Save 10% on your new business listing or banner advertising purchase by mentioning NAHA. Email for details.

www.aromaweb.com

Ashi Aromatics Inc.
Over 100 Holistically formulated aromatherapy products, therapeutic massage blends, facial and body skin care line, feng shui and chakra anointments and animal aromatherapy-All Natural Products for People and Their Animals Friends. PETA Approved Cruelty-free Vegan. Retail/Wholesale/Professional Discounts. Online Classes in Animal Aromatherapy and Flower Essences for Animals. Nationally approved CE courses available for Licensed Massage Therapists. Sign up for our free Newsletter.

www.ashitherapy.com

Birch Hill Happenings Aromatherapy, LLC
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www.jennscents.com

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Robert Tisserand Expert in Aromatherapy and Essential Oil Research
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www.roberttisserand.com

Sedona Aromatherapie
Sedona Aromatherapie creates custom aromatherapy blends and skincare products for weddings, spas, therapists or the individual, in addition to offering beginner aromatherapy courses in skincare and product making through online and distance learning aromatherapy courses (NAHA approved). English certified clinical aromatherapist Sharon Falsetto also offers professional services for copy and web content writing, ghost writing and blogging, course writing and newsletters, designed to meet the needs of your aromatherapy business! E-mail me for a custom quote on any service/product!

www.sedonaaromatherapie.com

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Since 1972, Time Laboratories has been a leading manufacturer of aromatherapy products, nutritional supplements, and specially formulated herbal compounds. Windrose Aromatics, our authentic aromatherapy line, offers a wide selection of Pure and Genuine GC/MS analyzed Essential Oils, expertly blended pure Essential Oil Combinations, and patented Ultra Jet System Diffusers. Buy direct from the manufacturer and save (retail/wholesale/health professional discounts available). Private label and custom product development services available.

www.timelabs.com
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www.aromahead.com

East-West School for Herbal & Aromatic Studies
NAHA-approved Level 1 and Level 2 professional clinical Aromatherapy training available live and distance learning. The EWSHAS offers classes throughout the United States for Aroma101 and Aroma201 as well as other specialized modules. Specialized topics include: Chemistry by and for the Aromatherapists, Aromatic applications for the skin, Aromatherapy and Hospice Care, Aromatherapy and Energetic Healing, and a variety of workshops for the general public and practitioner. CE hours are available for massage therapists (NCBTMB approved provider).

www.theida.com

Institute of Integrative Aromatherapy
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www.floramedica.com

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NAHA Aromatherapy Journal www.naha.org

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Please consult your health care practitioner if you are pregnant or have been diagnosed with any serious healthcare problems before using essential oils. Keep all aromatherapy products out of reach of children and pets. Before using essential oils and aromatherapy products please consult with a professional aromatherapist.

NAHA asks that all authors and contributors include information on safe use of essential oils and clearly define each essential oil’s common name and Latin binomial(s). NAHA has the right to accept or reject any articles, advertisements or content submitted. NAHA website is a resource-full area for information on Aromatherapy Safety, Applications and Uses.

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