

Homemade Whipped Body Butter & Solid Lotion Bars
An Albion District Library Workshop
11/19/2015

Common Ingredients

Shea Butter – anti-inflammatory, antioxidant

Shea butter comes from the fat of the nut of the African Shea tree. Traditionally, it's used to reduce the appearance of fine lines, scars and stretch marks, and to ease a variety of skin irritations, such as psoriasis, eczema, and sunburn. Shea butter is ideal for the topical application of cosmetic and medicinal formulas, because it melts on contact and is readily absorbed into the skin, without leaving a greasy residue. Shea butter contains vitamins A and E, as well as catechins, plant antioxidants also found in green tea. Shea butter has a melting point of approximately 85-90 degrees F.

Cocoa Butter - antioxidant

In the last decade, cocoa butter has become widely accepted as a beneficial skin care ingredient. Cocoa butter penetrates the top layer of the skin called the epidermis. The cocoa butter can also reach the dermis, the middle layer. The butter is extracted directly from cocoa beans as a yellowish fatty acid. It has naturally high levels of vitamin E, which is proven to help with skin renewal and repair. Cocoa butter is also an antioxidant. Antioxidants protect the skin from free radicals or toxins that damage tissues at the cellular level. The antioxidant property also provides a natural preservative so cocoa butter lasts for a long time. Cocoa butter has a melting point of approximately 85-90 degrees F.

Warning: Cocoa butter is made from the same plant as chocolate. If you have a chocolate allergy, you should avoid cocoa butter as a topical ingredient in products until and unless you have used a patch test to confirm no reaction.

Coconut Oil – antibacterial, antimicrobial, antifungal, antiviral, antioxidant

Coconut provides a very unique type of oil, made of several ingredients including medium chain fatty acids, lauric acid, and saturated fat. It is semi-solid at room temperature (68-72 degrees) as a soft, almost waxy substance, but melts on contact, absorbs quickly, and most often doesn't leave any "greasy" feeling behind. Coconut oil has a melting point of approximately 74-76 degrees F.

Natural Beeswax

Beeswax contains compounds called "wax esters" that exist in both beeswax and human skin. Beeswax is a hydrating ingredient that increases skins essential moisture and works in retaining natural skin moisture.

The melting point for beeswax is approximately 140 to 150 Degrees F. Beeswax should only be melted in an approved electric wax melter, crock pot, microwave oven (60 seconds at a time in defrost mode), or using double boiler. The double boiler will give you the most control.

Warning: If you have a bee allergy, you should not use beeswax, until and unless you have used a patch test to confirm no reaction. Do not melt beeswax in a pan directly on a stove over direct heat or in a microwave at full power. Beeswax is mildly flammable and will ignite if the wax comes in direct contact with a flame. This includes microwaving in a paper cup and exceeding the ignition temperature of paper.

Bergamot Oil - analgesic, antidepressant, antiseptic, antibiotic, anti-spasmodic

This oil is cold expressed from the peel of the inedible bergamot citrus fruit. It is the characteristic flavor of Earl Grey tea, and is used as a fragrance for pipe tobaccos. It is fresh, spicy, floral, citrusy, and is one of the most widely used scents in the perfumery and toiletry industry.

Warning: Bergamot oil can cause skin irritation and sensitizing in some individuals. Since it is a phototoxic oil, it should not be used (even in low dilution) before being exposed to the sun.

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Eucalyptus Oil - antifungal, analgesic, antimicrobial, antiseptic, anti-inflammatory, antibacterial, and is known to work as a decongestant and gentle expectorant

Eucalyptus oil can be helpful when used for headaches, fevers, ailments of the respiratory tract, muscular aches and pains, and in skin care. It seems to be effective against bacteria - especially staphylococci, and seems to have a refreshing and stimulating action on the mind, helping to improve concentration. Apart from giving pain relief to muscular spasms and rheumatism, eucalyptus oil in creams and lotions may help speed up the healing of slow healing wounds and ulcers, calm skin eruptions, and clear congested skin. It is also used as an insect repellent.

Warning: Eucalyptus oil should not be taken by mouth or applied to the skin full-strength. It must be diluted for safety.

Grapefruit Oil - antidepressant, antiseptic, disinfectant

Used in a base cream, lotion or as a wash, grapefruit oil can help to clear a greasy, congested and acne-prone skin. Grapefruit oil is non-toxic, non-irritant, and non-sensitizing.

Warning: Although listed as non-phototoxic, it can irritate the skin if exposed to strong sunlight after treatment.

Lavender Oil - analgesic, anti-itch, anti-inflammatory, antiseptic, antibacterial, and is considered to be an antidepressant

Lavender oil is generally considered one of the safest essential oils, and is one of the few essential oils that can be used neat on the skin. When it is used in a cream or lotion, it seems most helpful with relieving burns as it helps the skin heal faster with less scarring. The soothing and anti-inflammatory action of lavender oil will also have a balancing action on the skin and has been often used for dermatitis, eczema, psoriasis, and acne.

Warning: When employing the anti-inflammatory action of this oil, use in concentrations of less than 1%. Applying products to the skin that contain lavender oil might not be safe for young boys who have not yet reached puberty. Lavender oil seems to have hormone effects that could disrupt the normal hormones in a boy's body. In some cases, this has resulted in boys developing abnormal breast growth called gynecomastia. The safety of these products when used by young girls is not known. Stop using lavender at least 2 weeks before a scheduled surgery, as lavender might slow down the central nervous system.

Lemon Oil - anti-inflammatory, antiseptic, antibacterial, antimicrobial

Lemon oil can be used in a cream or lotion to clear congested skin. The astringent properties are great for oily skin conditions. The antiseptic effect of lemon oil on the other hand, helps to treat any cuts, boils and minor wounds.

Warning: Lemon oil is non-toxic, but can cause skin irritation and sensitizing in some individuals. Since it is a phototoxic oil, it should not be used (even in low dilution) before being exposed to the sun.

Lime Oil - antiseptic, antiviral, astringent, antibacterial, and disinfectant

Lime oil is non-toxic, non-irritant and non-sensitizing if the oil is obtained by steam extraction. Your oil should list its extraction technique on the label.

Warning: Lime oil obtained from cold expression can cause photosensitivity in strong sunshine and can irritate the skin.

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Peppermint Oil - antibacterial, anti-inflammatory, antifungal, antimicrobial, antiseptic, astringent

Peppermint oil is non-toxic and non-irritant in low dilutions, but sensitization may be a problem due to the menthol content. The botanical name of peppermint is mentha piperita. Extracted from the herb by steam distillation, the oil of peppermint is clear with a slight tinge of yellow. Its main constituent is menthol, which imparts the famously heady, minty aroma and the remarkable “cooling sensation,” when tasted or touched.

Peppermint oil comprises vitamins A and C, omega-3 fatty acids, and minerals including potassium, manganese, iron, magnesium, calcium, and copper. Peppermint oil benefits the respiratory system as the menthol in peppermint oil can help to clear the respiratory tract. It acts as a mild expectorant and can provide relief during a regular bout of cold and cough, and, for some, the more serious sinusitis, asthma, and bronchitis.

Warning: It is important to note that peppermint essential oil is intense and far more concentrated than other essential oils. The topical application of peppermint oil is generally safe, although it is necessary to dilute with a carrier oil like almond or jojoba oil and should be kept well away from the eyes. It is advised that some people may experience a burning sensation or allergic rash, especially with sensitive skin. It should be avoided during pregnancy and should not be used on children under seven.

Rosemary Oil - analgesic, antidepressant, astringent, hypertensive, stimulant

Rosemary oil is steam distilled from fresh rosemary flowers. It is strong, clean, camphor-like, and has a woody-balsamic undertone. Rosemary oil seems to have a pronounced effect on the brain and the central nervous system and can be used to stimulate the mind and mental awareness, as well as improving memory. Many say that it helps with headaches, migraines, and mental fatigue.

Warning: Rosemary oil should not be used during pregnancy and is unsuitable for people with epilepsy or high blood pressure.

Tea Tree Oil - antimicrobial, antiseptic, antiviral, anti-bacterial

Most experts consider tea tree oil to be safe as a topical treatment. Today, tea tree oil is often used externally as a folk or traditional remedy for a number of conditions including athlete's foot, nail fungus, wounds, and infections; or for lice, oral candidiasis (thrush), cold sores, dandruff, and skin lesions. Tea tree oil may be effective for acne. One clinical trial compared a 5% tea tree oil gel to a 5% benzoyl peroxide product for the treatment of acne and found that the benzoyl peroxide worked slightly better, but that the tea tree oil had fewer side effects.

Warning: When applied to the skin neat (in its pure 100% oil form), tea tree oil is non-toxic and non-irritant, but some individuals do show sensitizing to this oil. It should not be used on deep wounds or near the eyes, ears, nose, or taken internally. Tea tree oil should not be swallowed. Poisonings, mainly in children, have caused drowsiness, confusion, disorientation, rash, and ataxia—a loss of muscle control in the arms and legs causing a lack of balance and coordination.

Things You Should Know About Essential Oils

Essential oils are not really oils. They do not contain the fatty acids that constitute what we would consider an actual oil. Most essential oils are high in antibacterial, antifungal, and antiviral properties. This makes them an excellent addition to your homemade cleaning preparations. Oils that are best for cleaning are: lemon, grapefruit, eucalyptus, peppermint, tea tree, lavender, and rosemary.

Fragrance oils and essential oils are NOT the same thing. As a rule of thumb, if you see the word “fragrance” or “fragrance oil” or even “perfume” on anything, you can assume this is synthetic and NOT natural. (Even if it says natural fragrance.)

Enormous amounts of plants are needed to produce essential oil. In fact, on the extreme end, it takes 4000 pounds of Bulgarian roses to produce 1 pound of essential oil. Other plants like lavender only take 100 pounds of plant material to produce a pound of essential oil.

Most essential oils should never be used undiluted on the skin. Instead, they should be combined with “real” oils (called carrier oils), waxes, butters, alcohols, or other diluting measures. Avoid the following essential oils while pregnant or nursing (and skip EOs completely in your first trimester): Aniseed, cedarwood, chamomile, cinnamon, clary sage, clove, ginger, jasmine, lemon, nutmeg, rosemary, sage (this is only a partial list of some of the more common essential oils).

Some people are very sensitive to essential oils, to the point of a contact allergy. Contact sensitivity is a type of allergic reaction. This can happen any time after the first exposure to an essential oil, and usually presents as an itchy rash or hives. This is caused by the immune system's response to one or more of the chemicals in the essential oil. The extent of the reaction may seem out of proportion to the amount of exposure. Again, old or altered essential oils are more likely to produce skin reactions. If you are someone who is taking a lot of prescription medication and/or has a lot of allergies, you should do a patch test by following the instructions below to check for skin irritation and sensitivity before using each essential oil.

To do a patch test:

- Mix a very small amount of essential oil/carrier at twice the concentration you plan to use. For example, if you plan to use a 3% mixture of the essential oil, mix it at 6% (six drops in a teaspoon of carrier oil, or three drops in ½ teaspoon of carrier oil).
- Using the inside of the forearm, apply a couple drops of your double concentration mix to the pad of a bandaid and keep the bandage on the skin. After 48 hours remove the bandage and check for irritation.
- You may repeat to check for allergic sensitivity. Remember, however, that allergies can develop any time after the first exposure; thus absence of a reaction does not necessarily mean that an allergy will not develop with later exposures.
- If the skin under or around the bandage becomes red, swollen, itchy, or develops blisters, that is a reaction and you should avoid skin exposure to the essential oil you tested.

Phototoxicity can occur after you apply an essential oil topically and then go out into the sun. This happens most often with certain citrus oils, such as bergamot, lemon, lime, orange, and angelica. For example, if you spray yourself with a solution of orange essential oil and then lie out in the sun or in a tanning bed, you will most likely get a sunburn or even deeper burns.

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Keep all essential oils out of the reach of children – and avoid contact with your eyes. This is just standard safety precautions, but must be mentioned.

Do not take essential oils internally, especially oils like wintergreen and eucalyptus. While some essential oils may be used well-diluted in something like toothpaste with safety, it's generally recognized that there's no need to take essential oils internally. In fact, there are several toxic essential oils that should be avoided even through skin contact. Luckily, these are NOT common essential oils, and most of them you'll never find in the store.

Essential oils will last for at least 5 years (if not 10), so one bottle could last you a decade. Hopefully that thought will help mitigate the cost involved in purchasing some essential oils. Because they are SO concentrated and only a tiny amount is needed in anything you do, they'll last you a very, very long time. The only exception to this rule is citrus oils, which will see a reduction in potency after a year or two.

Store your essential oils in dark glass bottles (which they were probably packaged in) **and out of direct sunlight.** This is simply to help preserve their potency.

Remember that what you're allergic to in food, you will be allergic to in essential oils. So if, for some reason, you can't eat sage without breaking out in a rash, steer clear of sage essential oil (or any product containing it).

The recommended usage of many essential oils is hotly contested throughout the aromatherapy profession. The majority of oils you find in the supermarket are absolutely safe (though you should research them before using them); however, once you start digging into the world of essential oils, you'll find that professionals – even within the same organization – debate extensively over the use of certain oils. If you're ever unsure about an oil or its use, do the research you can, and if you still cannot make up your mind as to its safety – avoid it. But, by all means, do NOT be afraid of essential oils. Just use them with care and respect.

Do NOT let pets (cats, dogs, birds, ferrets, horses, etc.) come into contact with or ingest essential oils or potpourri, as many are highly toxic.

Essential oils have become popular for their use in aromatherapy and alternative medicine; they are also used in cleaning products, food and drink flavorings, herbal remedies, perfumes, personal care products, and liquid potpourris. Liquid potpourris are often used as home air fresheners and fragrances. Many liquid potpourri products and essential oils, including oil of cinnamon, citrus, pennyroyal, peppermint, pine, sweet birch, tea tree (melaleuca), wintergreen, and ylang ylang, are poisonous to pets.

Keep essential oils and liquid potpourri products out of reach of pets at all times. Curious animals may want to investigate the sweet-smelling liquids, so never leave opened essential oils or simmering potpourri unattended. In addition, consult a veterinarian before using any essential oils or other herbal products on your pet. Never apply a concentrated essential oil on your pet!

Both ingestion and skin exposure can be toxic. Essential oils and liquid potpourris contain chemicals that are rapidly absorbed orally or through the skin. Many of these chemicals are metabolized through the liver. In addition, cats lack some of the enzymes necessary to effectively metabolize these chemicals. Therefore, cats, newborns, and animals with liver disease are more sensitive to their effects. Liquid potpourri and some essential oils can also irritate or burn the skin and mouth.

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Only a couple of licks or a small amount on the skin could be harmful to a dog or cat, depending on the ingredients in a specific product and how the pet is exposed. Cats can be exposed by tasting liquid potpourri as it simmers or by coming in contact with liquid from leaking or overturned containers. Cats in particular are prolific self-groomers, so if these products get on their skin, they will often ingest them.

Symptoms may include: Fragrance or scent on hair coat; skin, or breath or in vomit; Changes in breathing; Difficulty walking or uncoordinated gait; Drooling; Lethargy or weakness; Muscle tremors; Pawing at the mouth or face; Redness or burns on the lips, gums, tongue, or skin; and Vomiting.

Rapid diagnosis and treatment are imperative. **If you believe that your pet has ingested or come in contact with essential oils or liquid potpourri, call your veterinarian or Pet Poison Helpline (800-213-6680) immediately.** The sooner you seek treatment, the better the prognosis and outcome for your pet. In addition, do not induce vomiting or give activated charcoal to your dog or cat, unless your veterinarian specifically directs you to do so. Put the product packaging in a sealed plastic bag, and take it with you to the veterinary clinic. If any product is on the skin or fur, quickly wash it off using a mild hand dishwashing detergent.

A Note on Formaldehyde-Donor or Formaldehyde-Releasing Preservatives

Because all microorganisms require water for growth, most water-based, multi-use products require preservation to protect against spoilage from bacteria, yeast, and fungi. Preservatives play an important role in controlling a range of microorganisms that may be introduced into cosmetics and other personal care products during normal use by consumers. Growth of microbes in these products can adversely affect consumer health and the aesthetic or functional qualities of products. Formaldehyde-donor (FD) preservatives are one family of ingredients whose chemistry, safety, efficacy, benefits and limitations have been widely studied for the control of microbial growth in personal care products.

FD preservatives contain a carrier molecule (a formaldehyde donor) that is chemically bound to formaldehyde and is designed to release small amounts of formaldehyde into the water base of the product over time rather than all at once, which helps maintain product integrity during use. At the concentrations used in personal care products, FD preservatives have been deemed as safe (non-toxic, non-carcinogenic, non-mutagenic and not a concern for systemic toxicity). They also show a low incidence of eye and skin irritation, and contact dermatitis.

Formaldehyde is a naturally occurring substance that is present in most life forms, including humans. All normally functioning cells in humans, animals and plants produce and use formaldehyde, but concentrations are so low that adverse health effects do not occur; for instance, human blood normally contains 2–3 ppm. Also, up to 100 ppm formaldehyde is reported to occur naturally in some types of foods, including pears. Formaldehyde does not accumulate in the body because it is metabolized quickly to sodium formate and is rapidly excreted. Similarly, it does not accumulate in the environment. When present in air, formaldehyde is broken down within a few hours by sunlight; in soil or water, bacteria initiate the breakdown.

FD preservatives used in personal care applications include DMDM hydantoin, imidazolidinyl urea, diazolidinyl urea, sodium hydroxymethylglycinate and quaternium-15, the first three of which are the most frequently used FD preservatives in the United States and Canada. The use of FD preservatives by the cosmetics and personal care industry has been established over several decades. In a 2010 frequency of use study on preservatives, formaldehyde donors were reported in approximately 15% of the 36,811 personal care product formulations submitted to the FDA's Voluntary Cosmetic Registration Program (VCRP). However, concerns about the adequacy of data on both dermal absorption and potential toxicity of quaternium-15 recently were raised by the SCCS in the European Union.

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In preparing for this program, I had an opportunity to discuss my plans with a dermatologist. When asked for any suggestions on what I should mention, he used the opportunity to express concern about FD preservatives and their prevalence in consumer products. This may be his opinion, but I felt it to be an educated opinion and one worth mentioning.

Sources

National Institutes of Health, National Center for Complementary and Alternative Medicine, Herbs at a Glance
<http://nccam.nih.gov/health/herbsataglance.htm>

Medline Plus, a service of the National Library of Medicine and National Institutes of Health, Drugs and Supplements
http://www.nlm.nih.gov/medlineplus/druginfo/herb_All.html

Krowka, John F. (PhD). The Importance of Formaldehyde-Donor Preservatives in Personal Care Products. *Cosmetics and Toiletries Science Applied (Journal)*, (July 2013), Posted on July 1, 2013.
<http://www.cosmeticsandtoiletries.com/formulating/function/preservatives/The-Importance-of-Formaldehyde-Donor-Preservatives-in-Personal-Care-Products-213895441.html>

Mountain Rose Herbs (storefront), <http://www.mountainroseherbs.com>

Esoteric Oils for Aromatherapy (storefront), <http://www.essentialoils.co.za/>

WebMD, <http://www.webmd.com>

Crunchy Betty (blog), <http://www.crunchybetty.com>

Frugally Sustainable (blog), <http://frugallysustainable.com>

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Glossary

- Butter: can be shea butter, cocoa butter, or other solid butters, such as mango butter
- Oil: can be coconut oil or other liquid oil, including olive oil, almond oil, jojoba oil, etc.

Containers

- Wax-lined paper cups make a good container for solid products, as the wax allows the product to be popped out easily.
- Silicone forms also make good containers for solid products, as the silicone allows them to release easily. These forms are also available in a wide variety of shapes and styles.
- Glass containers, including recycled food containers and half-pint mason jars, are good containers for less solid products as you can melt, mix, and store the product in the same container.

Recipes

Whipped Body Butter (with Coconut Oil)

2 parts butter
1 part coconut oil
3-5 drops essential oils (up to 10, if stronger scent is desired)

This recipe comes together in this proportion because coconut oil is solid below 72 degrees F. Gently melt the butter just until it turns to liquid. Add the coconut butter. The residual heat of the butter will melt the coconut oil. Cool until it become opaque, stirring gently. Whip with a hand or stand mixer. As it continues to cool, it will begin to turn from clear to cloudy. When it is cloudy, but still liquid, add any desired essential oils. Continue to whip until white and fluffy. You may notice that the pitch of your mixer rises when it hits the perfect temperature. This may happen very suddenly. It should look like butter cream frosting.

Apply in very small amounts (less than pea-sized) to begin and increase as needed.

Whipped Body Butter (with Liquid Oil)

3-4 parts butter
1 part liquid oil (olive oil, jojoba oil, almond oil, etc.)
3-5 drops essential oils (up to 10, if stronger scent is desired)

This recipe requires a higher proportion of butter to oil due to the fact that the liquid oil, unlike coconut oil, will not solidify above freezer temperatures (olive oil: 20 degrees F, jojoba oil: 10 degrees F, almond oil: 0 degrees F). More butter is needed to overcome this, become thick and silky, and be able of holding the air.

Gently melt the butter just until it turns to liquid. Add your liquid oil. Whip with a hand or stand mixer. As it continues to cool, it will begin to turn from clear to cloudy. When it is cloudy, but still liquid, add any desired essential oils. Continue to whip until white and fluffy. You may notice that the pitch of your mixer rises when it hits the perfect temperature. This may happen very suddenly. It should look like butter cream frosting.

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Solid Lotion Bars

Solid lotion bars work better for some than for others, specifically due to the varying amounts of softeners (oils and butters) and strengthener (beeswax). When making these for yourself or others as gifts, I advise doing the following experiment with very small amounts (1 part=1 tsp) and picking the best one for (each of) you by applying it on the delicate skin of the inside arm or of the neck, if you're looking for a facial lotion.

Recipe #1 – Solid, and melts very slightly with application

2 parts butter
1 part beeswax

Recipe #2 – Solid, but melts quickly in the hand

1 part butter
1 part oil
1 part beeswax

Recipe #3 – Has a solid shape, but is soft and melts quickly in the hand

2 parts oil
1 part beeswax

Melt the ingredients slowly in a double boiler or microwave in defrost mode until liquid. Take off heat and add any essential oils (begin with 1-5 drops, depending on amount and strength of scent desired). Pour into container and refrigerate to harden.

Take note of your circumstances. Are you looking for something that lasts or something that is easily absorbed and should be applied through the day? The higher the amount of beeswax, the less the lotion will easily wash off. Beeswax does not break down as the butter and oil will with soap and water. Beeswax will come off with scrubbing or 150 degree water, which may be not advisable.

Pump-able Lotion

1 part butter
2 parts oil (including at least 1 tsp of oil that is liquid at room temperature, i.e. olive, sweet almond, jojoba, etc.)
1-5 drops essential oil of your choice

Melt the ingredients slowly in a double boiler or microwave in defrost mode until liquid. Take off heat and add any essential oils (begin with 1-5 drops, depending on amount of lotion and strength of scent desired). Mix with a hand or stand mixer until soft and fluffy. Pour into pump container. If not soft enough, re-melt and add an additional 1 tsp of liquid oil. This will be easier to pump during summer's higher temperatures, as coconut oil melts at approximately 74 degrees and the butters at about 85 degrees. If you live in a very warm climate where the temperature (where the lotion is) is consistently above 85, you might consider adding a small amount (maybe 1 tsp) of beeswax to keep it semi-solid and not liquid.

Just remember, the best part about making these products at home is that you can experiment with ratios and types of oils, butters, and beeswax to find what works best for you and your family.

If your first attempt didn't turn out, just melt it back down and try again with more of the needed ingredient!

**Please, though, be cautious when increasing the amounts of essential oils.
Above all else, though, have fun with it! Enjoy!**