

your dewy skin defense

NEW! phyto replenish oil



dermalogica[®]

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introduction

As a professional skin therapist trained by Dermalogica and The International Dermal Institute, you are in a highly-unique position to help clients learn which oils are right for their skin conditions – and how to get the best results.

More consumers are realizing that oils play a vital role in skin care but not all of them understand which oils do what, or how the right oils work to enhance and protect the skin's natural glow. In fact, many consumers are still concerned that oil-based products will lead to clogged pores, breakouts and overly-shiny skin. In reality, plant-based oils can dramatically strengthen, hydrate and shield the skin while promoting a healthy, dewy finish.

Plant oils, or *phyto* oils, are particularly adept at treating numerous skin conditions, from dryness and premature signs of skin aging to uneven skin tone, dehydration and skin sensitivity. Such oils possess remarkable barrier-replenishing and hydrating properties, and provide superior antioxidant protection, which is why we have focused on leveraging them for **NEW Phyto Replenish Oil**. This feather-light treatment oil is ideal for clients seeking dry skin relief, skin rehydration and fine line prevention, as well as the cosmetic benefit of an all-day dewy glow.

phyto replenish oil at a glance

why your clients need it

NEW Phyto Replenish Oil restores the skin's protective lipids, which are critical for preserving a dewy, youthful appearance. Aging and environmental stress deplete the skin's natural lipids over time, leaving skin vulnerable to dryness, dehydration and damage.

what it is

A next-generation, daily-use treatment oil that leverages the best of nature and its many phytoactives to solve dryness and dehydration while reinforcing the skin's natural protective function.

how it works

Phyto Replenish Oil works in three phases to strengthen, hydrate and shield for healthy, luminous skin.

Phase one: strengthens

Phytoactives from Camellia and Tamanu oils help restore the skin's natural barrier.

Phase two: hydrates

An essential lipid blend that includes Orchid Flower and Chia Seed Oil smoothes visible dehydration lines and locks in critical moisture.

Phase three: shields

Sunflower, Rice Bran and Rosemary extracts create a luminous antioxidant shield against free radical damage.

skin condition

Ideal for normal to dry skin conditions.

application

After cleansing, press 4–6 drops into skin. Follow with recommended Dermalogica Moisturizer. Alternatively, mix with Dermalogica Moisturizer to apply. Hold bottle upside down for 2–3 seconds to initiate product flow. Use daily.



the power of phytoactives

Plants possess natural phytoactives, or chemical constituents, that have the ability to impact the structure and health of our skin. From plant polyphenols and bioflavonoids to phytolipids, exfoliants, collagen stimulators and anti-inflammatory agents, phytoactives have been used to treat many skin conditions.

Of particular interest to those with dry or dehydrated skin are phytolipids. When introduced into the skin, phytolipids can act as a powerful substitute for the skin's own natural lipids, which are lost over time due to aging, seasonal fluctuations, diet and other factors. (See **Factors that Compromise the Barrier Lipid Layer**, p. 7.)

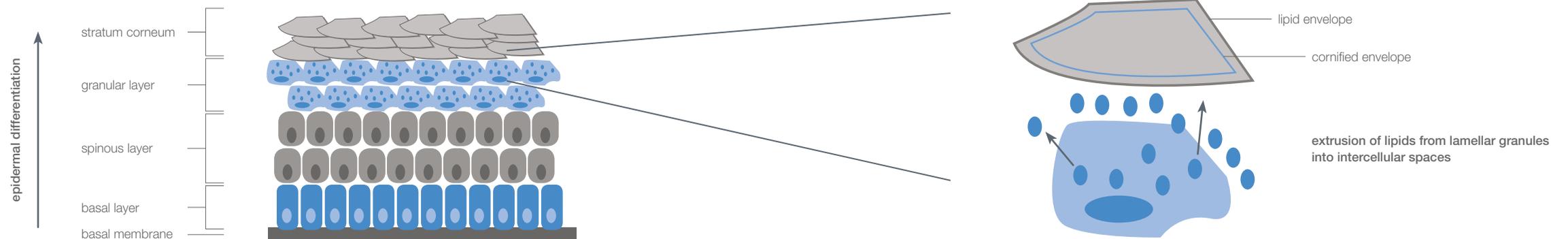
The Importance of Lipids in the Epidermis

Individuals with a dry (alipoid) skin condition naturally lack sufficient oils to maintain optimal skin health. They may regularly feel dry all over and be more susceptible to UV exposure and dry environments, leading to skin tightness, itchiness, sensitivity and fine dehydration lines, as well as premature signs of aging. These skin concerns stem from both genetics and compromised lipid conditions in the skin's natural protective barrier.

Lipids, or natural protective oils, play a critical role in preserving the health of the skin and maintaining its youthful appearance. They are essential for maintaining the integrity of all living matter due to their ability to form a barrier between the living cell and the outside world.

In human skin, lipids are used as building blocks for membranes and fulfill specific functions such as preventing desiccation – a state of extreme dryness – by forming a barrier that prevents the evaporation of water. Some lipids are synthesized in the epidermis and carried to the surface as cells differentiate, whereas others are secreted onto the surface from the sebaceous glands, forming sebum. Regardless of their origin, lipids help manage hydration and moisture levels in the skin, which is a critical function of this protective barrier. With lipid depletion, Trans-Epidermal Water Loss (TEWL) can occur more readily, leading to dehydrated skin. When skin is both dry and dehydrated, it becomes uncomfortable and more vulnerable to damage, sensitivity and premature signs of skin aging.

Figure 1. The role of lipids in cellular protection of the stratum corneum.



The outermost layer of the epidermis, the stratum corneum, constitutes the main barrier to the diffusion of substances into and out of the skin. (See Figure 1.) It consists of corneocytes (stratum corneum cells) and several intercellular lipid classes: ceramides, sterols (including cholesterol esters) and free fatty acids. These lipids that make up the barrier lipid layer of the stratum corneum are extruded from cells during the process of keratinization in the epidermis.

Factors that Compromise the Barrier Lipid Layer

Aging has an effect on the composition of stratum corneum lipids over time. With age, lipid depletion occurs naturally as lipid production slows. Studies have shown a decrease in ceramide and sterol content, as well as an increase in fatty acid composition in aged skin.¹ A reduction in ceramides generally leads to an increase in skin sensitivity or irritability.²

Our skin can restore its natural barrier lipids after being compromised. However, the time required for barrier lipid recovery varies according to age. In younger individuals, 50–60% of barrier lipids are restored within 12 hours, with full recovery taking about three days. In older adults, complete recovery can take over a week. Depending on the condition of the skin, this can lead to dehydration and additional sensitization.

Seasonal changes have also been shown to impact stratum corneum barrier lipids, leading to dryness, roughness and increased TEWL, as well as increased sensitivity.

Diet, over-use of exfoliants and ingredients applied to the skin can also impact the barrier lipids and cause depletion. Alcohol in skin products, acetone-containing toners, harsh surfactants, AHAs, BHAs and retinoids can strip lipids, giving skin a taut feeling. When individuals reduce fat consumption (to control weight loss), they often find their skin shows signs of lipid deficiency (dehydration, flakiness, itchiness). This may also be attributed to the fact that humans need fats to help with the absorption of fat-soluble vitamins A, D, E and K.³

Stress, UV exposure and some diseases can be additional sources of lipid depletion over time. Stress elevates glucocorticoid levels, which can delay barrier recovery. Exposure to UV radiation can lead to the formation of free radicals that cause extensive lipid peroxidation, which damages the integrity of the skin.⁴ Several pathological skin conditions have been identified where the barrier lipid layer is perturbed; these include ichthyosis, psoriasis and even atopic dermatitis.

Unfortunately, nothing good can result from having a compromised lipid barrier layer. It is therefore important to take proactive measures to fight lipid depletion and replenish lost lipids in order to maintain healthy skin.

key ingredients

Phytoactives for Optimized Skin Health

One of the best ways to restore compromised skin barrier function is to replace intercellular lipids that have been depleted. When introduced into the skin, phytoactives can help reinforce the skin's barrier lipid layer, promote moisturization and skin smoothing, as well as visually reduce signs of dryness.

Restoring barrier lipids also inhibits TEWL to trap moisture inside the skin – and helps seal the Natural Moisturizing Factor (NMF) inside cells, where it is needed to keep cells hydrated and enzymes functioning properly. Maintaining lipid balance in the skin helps sustain an optimal environment for many of the skin enzymes responsible for activities like desquamation, while helping to keep external microorganisms from penetrating the skin's barrier.

Perhaps the first benefit clients see after phytoactives are introduced into the skin is a dewy, luminous finish. While this may look like a purely cosmetic benefit, it is a result of the reinforced lipid layer and increased moisture levels experienced by the skin.

When creating Phyto Replenish Oil, the skin health experts at The International Dermal Institute delved deep into the science behind the barrier lipids of the stratum corneum, as well as how to optimize their functionality. They selected the following plant phytoactives, or phytolipid complexes, and supporting ingredients because of superior performance in one or all of the following categories: replenishing the skin's protective barrier; optimizing hydration and/or reducing skin sensitivity; providing antioxidant protection; and improving the overall health and "dewiness" of the skin.

Camellia Japonica (Camellia) Oil

Also known as Tsubaki (Japan) or Dongbaek (Korea) Oil, this unique plant oil provides a light, esthetically-pleasing feel to the skin, as well as calming, soothing benefits,⁵ a reduction in TEWL and stimulation of collagen production.⁶

Camellia Japonica is often called the "Rose of Winter" and is a member of the tea family. A small flowering tree native to Korea and Japan, it is grown on South Korea's Jeju Island – famous for its unpolluted, clean environment. The oil is a rich source of fatty acids and contains about 83% Oleic Acid, 8% Linoleic Acid, 8% Palmitic Acid and 1% Stearic Acid.

In clinical tests (erythema-induced skin), Camellia Japonica Oil provided lipid barrier properties that showed an inhibition in TEWL. It also inhibited pro-inflammatory mediators and was more soothing than Bisabolol.⁷

Camellia Japonica Oil also helps reduce signs of skin aging. Laboratory studies using human fibroblast cells demonstrated a dose-dependent increase in collagen synthesis when treated with Camellia Japonica Oil.⁶

When compared to other antioxidants, Camellia Japonica Oil has an Oxygen Radical Absorbance Capacity (ORAC) score similar to Olive Oil and Vitamin C. It provides twice the antioxidant protection of Vitamin E, Grapeseed Oil and Rosehip Oil. Its superior antioxidant properties help combat Reactive Oxygen Species (ROS), or free radicals, which contribute to the breakdown of lipid-rich cell membranes within the skin and leave the skin vulnerable to damage.





Calophyllum Inophyllum (Tamanu) Oil

This South Pacific oil is extracted from the Calophyllum Inophyllum seeds of the Ati Tree or the “tree of one thousand virtues.” According to ethnobotanist Chris Kilham, Tamanu Oil is one of the most effective agents for promoting the formation of new tissue, thereby accelerating wound healing and the growth of healthy skin. Hence, Tamanu Oil is a powerful skin regenerator.

Traditionally, Tamanu Oil has been used for centuries to combat a wide range of skin issues. It is highly beneficial as an antioxidant, anti-bacterial and skin-soothing agent.⁸ Specific phytoactives from Tamanu Oil are potent antioxidants themselves, and inhibit the breakdown of lipid-rich cell membranes from free radicals. This is especially important for protecting the integrity of the skin’s barrier lipids when exposed to UV radiation.⁹

Cymbidium Grandiflorum (Orchid) Flower Extract

The Orchid, the national flower of Thailand, is very well known for its moisturizing properties, as well as its abilities to fight free radicals and help reduce the appearance of fine lines. Cymbidium Grandiflorum Extract is ideal for all skin conditions and rich in minerals that exist naturally in the skin. Such minerals include Zinc, Calcium, Magnesium, Iron and Copper. In addition, sugar and polysaccharides found in this extract help to seal in moisture while balancing the skin’s NMF.

Salvia Hispanica (Chia Seed) Oil

Chia Seeds were an ancient nutritional staple in Mayan and Aztec diets. Today, they are found in many health and energy drinks, and in skin care for their exceptional antioxidant, anti-inflammatory and moisturizing properties.

Extracted from the plant Salvia Hispanica, a member of the Mint family, Chia Seed Oil is rich in antioxidants that help quench free radicals, and rich in omega-3-fatty acids – known to help reduce inflammation. Chia seeds contain anywhere from 25–40% oil, with 60% of it comprising omega-3 Alpha-Linolenic Acid and 20% of it comprising omega-6 Linoleic Acid. Both essential fatty acids are required by the human body for good health, and cannot be artificially-synthesized.

Research also found that a topical application of Chia Seed Oil led to significant improvements in skin moisture, skin thickening and crusty lumps in patients with pruritis caused by end-stage kidney disease, as well as in healthy patients with xerotic pruritis. (Pruritis is an unpleasant skin sensation that produces a strong urge to scratch, while xerotic pruritis is a form of the condition that includes redness, dry scaling and cracks in the skin.)¹⁰

Hydroxy-Methoxyphenyl Decanone

Synthetically-made, but nature-identical to actives found in plants of the Ginger family, this ingredient is a highly-potent Hyaluronic Acid booster, antioxidant and anti-irritant. Studies with human fibroblasts show a stimulation to epidermal Hyaluronic Acid levels by 198% as well as inhibition of inflammatory modulators.¹¹

Helianthus Annus (Sunflower Seed) Extract

Sunflowers are native to the southwestern United States and have been used for food, medicine and ornamental purposes for generations.¹² Sunflower Seed Extract, or Oil, is rich in Linoleic Acid and has been used topically in the treatment of essential fatty-acid deficiency, rapidly reversing the disease with its excellent absorption capacity.¹³ These essential fatty acids can help maintain the skin barrier and decrease TEWL – both important with skin issues such as atopic dermatitis.¹⁴

Several studies have also suggested that Sunflower Seed Extract has anti-inflammatory properties. In one study, 19 adults were randomized to receive Olive Oil on one arm and Sunflower Seed Oil on the other arm for four weeks. Interestingly, the Olive Oil resulted in a worsening of the skin’s barrier function and even erythema in subjects with and without a history of atopic dermatitis. Sunflower Seed Oil, on the other hand, did not cause erythema and preserved skin barrier function while actually improving hydration.¹⁵

Sunflower Seed Extract is also a rich source of tocopherols (Vitamin E), which provide excellent antioxidant properties to the oil. Antioxidants are key to preserving the skin’s protective barrier and defending against free radical damage.^{16, 17}

Oryza Sativa (Rice Bran) Extract

Rice Bran Extract comes from the Rice seed or husk as a result of Rice processing. This ingredient is found in several Dermalogica products because of its many skin benefits.

The abundance of antioxidants and fatty acids in Rice Bran Extract makes it a top-quality moisturizer and protector against harmful free radicals. Rice Bran Extract is extremely rich in Vitamins B and E, which help moisturize and reduce traces of skin roughness. This is especially important in the harsh winter months, when skin tends to become dehydrated and flaky.

Rice Bran Extract also fights skin aging and protects skin from UV rays. Research shows that Rice Bran Extract improves the collagen integrity of skin and

thus wards off inflammation and puffiness around the eyes.

Another interesting effect of Rice Bran Extract is that it brightens the skin. This is due to its skin-smoothing Phytic Acid, which effects melanogenesis and helps to control hyperpigmentation.¹⁸

Rosmarinus Officinalis (Rosemary) Leaf Extract

Rosmarinus, native to the Mediterranean area, now grows widely in other parts of the world. It is a fragrant, evergreen shrub that can grow up to six and a half feet tall. Its long, needle-like leaves and parts of its small, pale blue flowers contain volatile oil, extracted as Rosemary Leaf Extract. This natural extract has purifying and anti-irritant properties. It is rich in Calcium, Magnesium, Iron, Manganese, Phosphorus, Potassium, Zinc and Vitamins B₁, B₃ and C.



Rosemary Leaf Extract is also a powerful antioxidant that helps protect against free radical damage and the effects of environmental stresses on the skin.^{19, 20}

Rosemary contains a number of phytochemicals, including Rosmarinic Acid, Camphor, Caffeic Acid, Ursolic Acid, Betulinic Acid, and the antioxidants Carnosic Acid and Carnosol.²¹

Additional Ingredients

Butyrospermum Parkii (Shea Butter) Extract

Shea Butter Extract is derived from the Shea tree (Butyrospermum Parkii or Vitellaria Paradoxa) native to Central Africa, where it is used as a source of vegetable oil. The oil from the fruit of the tree contains about 45–50% Oleic Acid, 30–41% Stearic Acid, 5–9% Palmitic Acid and 4–5% Linoleic Acid. Studies indicate that the oil provides anti-inflammatory properties.²²

Oleic/Linoleic/Linolenic Polyglycerides

This phytochemical blend of essential fatty acids not only provides an emollient feel to Phyto Replenish Oil but also provides moisturizing properties and contributes to the skin barrier protective function, as measured by TEWL with an Evaporimeter.[®] Linoleic and Linolenic Acid are well-known essential fatty acids that humans get from their diets. There is substantial evidence that Linoleic Acid is an essential structural component of critical skin ceramides.²³

Tocopherol (Vitamin E)

This non-derivatized form of Vitamin E is a powerful antioxidant that scavenges damaging free radicals and improves barrier function of the skin.^{16,17}

Ingredients by Benefit

ingredients	hydrating	barrier-repairing	antioxidant	age-fighting	soothing; anti-itch
Camellia Japonica (Camellia) Oil	•	•		•	•
Calophyllum Inophyllum (Tamanu) Oil		•	•	•	•
Salvia Hispanica (Chia Seed) Oil	•		•		•
Cymbidium Grandiflorum (Orchid) Flower Extract	•				
Hydroxy-Methoxyphenyl Decanone	•		•		•
Oleic/Linoleic/Linolenic Polyglycerides*	•	•			
Oryza Sativa (Rice Bran), Rosmarinus Officinalis (Rosemary) Leaf and Helianthus Annus (Sunflower Seed) Extracts		•	•		
Butyrospermum Parkii (Shea Butter) Extract	•	•		•	•
Tocopherol (Vitamin E)	•	•	•		•

*From Sunflower Seed Oil

professional recommendations

Choosing the Right Oil

Dermalogica makes a variety of oil-based products designed to improve the overall health of the skin. Which oil is right for your client should be determined by a thorough Face Mapping[®] skin analysis.

product	skin condition	properties	best for	
RETAIL				
	NEW phyto replenish oil	Normal to dry skin.	barrier-replenishing, luminizing	Strengthening, hydrating and protecting skin for an all-day dewy finish.
	overnight repair serum	Mature or prematurely-aging skin.	anti-aging, revitalizing	Firming to reduce visible signs of skin aging nightly.
	precleanse	All skin conditions.	cleansing	Dissolving stubborn make-up and impurities.
PROFESSIONAL USE ONLY				
	clearing additive	Breakout-prone skin.	breakout-clearing, aromatherapy	Massage, Touch Therapy; purifying and balancing breakout-prone skin.
	revitalizing additive	Mature or prematurely-aging skin.	restorative, aromatherapy	Massage, Touch Therapy; renewing, smoothing and protecting mature, dry skin.
	soothing additive	Sensitized skin.	calming, aromatherapy	Massage, Touch Therapy; reducing redness and skin sensitivity.
	multivitamin power exfoliant	Mature or prematurely-aging skin.	exfoliating (with a unique lipid base)	Flash exfoliation; removing dulling surface debris while minimizing client sensitivity.

There are many ways to educate your clients on the benefits of Phyto Replenish Oil, and incorporate this product into both professional treatments and at-home regimens.

NEW! FaceFitSM Treatments at Skin Bar[®]

Showcase Phyto Replenish Oil for your clients in the **Dewy Skin FaceFitSM**, one of several 10-minute, hands-on treatments in this exciting new service category.

UPDATED! MicroZone[®] Moisture Boost Express Skin Treatment

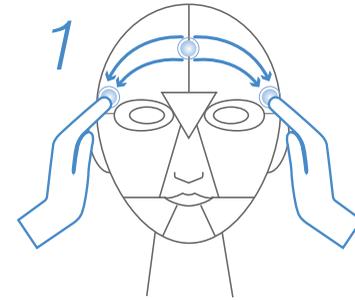
Rehydrate and replenish dry, thirsty skin with this intense moisture quench for the face, now featuring Phyto Replenish Oil.



NEW! Dewy Skin DIY

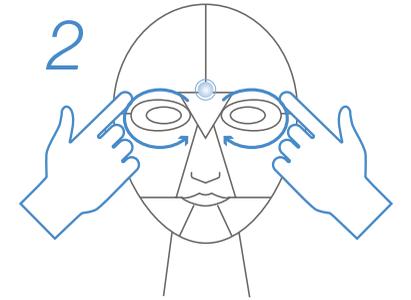
time: 2 minutes

Teach your clients how to do this Dermalogica-exclusive facial massage at home. It helps promote the absorption of Phyto Replenish Oil into the skin, as well as boost skin circulation and detoxification, further smooth fine lines and alleviate muscle tension. Your clients will love their vibrant, dewy skin – and have more confidence in the value of seeking professional advice from a Dermalogica skin therapist.



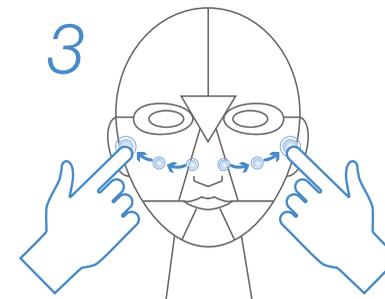
Forehead Wrinkle Release

Press fingertips into forehead and glide toward temples. Press again. **Repeat 3 times.**



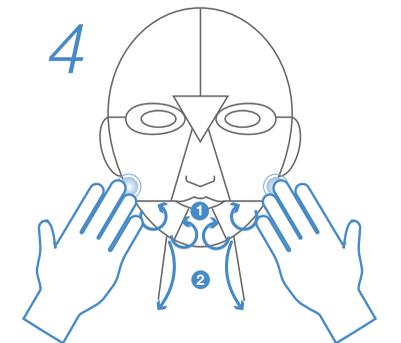
Revitalize Eyes

Press between brows, then glide index fingers around brow bone and under eyes. Alternate fingers in an "S" shape between brows. Press. **Repeat 3 times.**



Glow Point Detox

Press and then glide between points at sides of nostrils, under cheekbones and in front of ears. **Repeat 3 times.**



Jawline Stress Release

Massage jawline in small, upward circles beginning with chin. Press at points below ears and glide down neck to collarbone. **Repeat 3 times.**

Watch a demonstration at education.dermalogica.com/TeachDewySkin

frequently asked questions

My client is concerned that oil-based products will make her skin too shiny or greasy. How do I overcome this?

Inform your client that Phyto Replenish Oil is a feather-light formula that absorbs rapidly into the skin for a healthy, dewy appearance. It won't leave a greasy residue. Encourage her to try it at the Skin Bar® as part of her Face Mapping® skin analysis results.

My client already uses a moisturizer. Can she use an oil too?

Skin changes with daily fluctuations in the body as well as with the seasons. Using an oil with a moisturizer can help replenish lipids, and provide anti-aging and protection benefits as well as

sustain moisturization. Advise your client to apply Phyto Replenish Oil before their daytime moisturizer, or mix it into their daytime moisturizer, and note the difference compared to using their moisturizer alone.

Is Phyto Replenish Oil non-comedogenic?

Yes. This high-quality formula is so light and well blended, it will not occlude pores. It is ideal for normal to dry skin conditions.

Can Phyto Replenish Oil be applied around the eye area?

Yes, however care should be taken not to get the oil into the eyes.



citations

1. Forster T and Marcel Dekker. eds. Lipids in Skin Care Formulations. Cosmetic Lipids and the Skin Barrier. 2002:279.
2. DiNardo, et al. *Contact Derm.* 1996; 35:86-91.
3. Bruso J. "What Are the Effects of a Fat Deficiency in Humans?" *Livestrong* 1 May 2015. Retrieved from: <http://www.livestrong.com/article/503785-what-are-the-effects-of-fat-deficiencies-in-humans/>
4. Girotti A. Lipid hydroperoxide generation, turnover, and effector action in biological systems. *Journal of Lipid Research.* 1998; 39:1529-1542.
5. Akihisa T, et al. *Chem. and Pharm. Bull. (Tokyo)* 45:1023--2016.
6. Jung E, et al. Effect of Camellia Japonica Oil on human type I collagen production and skin barrier function. *J. Ethnopharmacology.* 112 2007:127-131.
7. Kim S, et al. Anti-inflammatory activity of Camellia japonica Oil. *BMB Reports* 2012: 177-182.
8. Collins D. Remarkable Skin Regenerator – Forgotten Tamanu Oil Has Been Revived. *Underground Health Reporter.* August 3, 2011. Retrieved from: <http://undergroundhealthreporter.com/skin-regenerator-tamanu-oil/#axzz44JoAFMWW>.
9. Longyear J. Tamanu: The Most Potent Skin Oil for Healing Acne Scars, Eczema and Sun Damage. *Young and Raw.* Retrieved from: <http://www.youngandraw.com/3-ways-tamanu-oil-can-heal-skin-problems-like-acne-eczema-and-sun-damage/>
10. Jeong, SK, et al. *Ann. Dermatology.* 2010; 22(2):43-48.
11. Proprietary Study.
12. López Pérez G, Torres Altamirano M. Indications for sunflower oil concentrate in the treatment of atopic dermatitis. *Rev Alerg Mex.* 2006; 53(6):217-25.
13. Lodén M, Andersson AC. Effect of topically applied lipids on surfactant-irritated skin. *Br J Dermatol.* 1996; 134(2):215-20.
14. Elias PM, Brown BE, Ziboh VA. The permeability barrier in essential fatty acid deficiency: evidence for a direct role for linoleic acid in barrier function. *J Invest Dermatol.* 1980; 74(4):230-3.
15. Danby S, Al Enezi T, Sultan A, Lavender T, Chittock J, Brown K, Cork M. Effect of Olive and Sunflower Seed Oil on the Adult Skin Barrier: Implications for Neonatal Skin Care. *Pediatr Dermatol.* 2013; 30(1):42-50.
16. Herrera E, Barbas C; Barbas. "Vitamin E: action, metabolism and perspectives." *Journal of Physiology and Biochemistry.* 2001; 57 (2):43-56.
17. Traber MG, Atkinson J; Atkinson. "Vitamin E, Antioxidant and Nothing More." *Free Radical Biology & Medicine.* 2007; 43 (1):4-15.
18. Sarkar R, Bansal S, Garg V. Chemical Peels for Melasma in Dark-Skinned Patients. *J Cutan Aesthet Surg.* 2012 Oct-Dec; 5(4):247-253.
19. Crowley, L. "Rosemary extracts to receive antioxidant status." *FoodNavigator.com* 16 June 2008. Retrieved from: <http://www.foodnavigator.com/Policy/Rosemary-extracts-to-receive-antioxidant-status>
20. Barbut S, Josephson DB, Maurer AJ. "Antioxidant Properties of Rosemary Oleoresin." *Journal of Food Science.* 1985; 50 (5):1356.
21. Nakatani, N. "Phenolic antioxidants from herbs and spices." *BioFactors.* 2000; 13 (1-4):141-6.
22. Akihisa T, Kojima N, Kikuchi T, Yasukawa K, Tokuda H, Masters ET, Manosroi A, Manosroi J. "Anti-inflammatory and chemopreventive effects of triterpene cinnamates and acetates from shea fat." *Journal of Oleo Science.* 2010; 59 (6):273-80.
23. Pappas A. Epidermal surface lipids. *Dermatoendocrinol.* 2009 Mar-Apr; 1(2):72-76.

dermalogica®

a skin care system researched and developed by The International Dermal Institute

