

RICE Bran Oil

Rich in essential fatty acids, trace elements, vitamin E, and mineral salts, rice bran oil **helps moisturize the skin and promotes skin microcirculation**. Rice bran oil has healing, restructuring, soothing, cicatrizing, repairing (reduces skin inflammation) and decongesting properties.

- Rice Bran Carrier Oil, also called Rice Bran Extract, is derived from the “Bran” layer of a grain of Rice. Bran is hard, brown, and high in oil content.
- Rice Bran Oil is known for its ability to cleanse, soften, moisturize, soothe, nourish, and smooth the skin. It slows the look of aging and brightens the complexion.
- Used topically, Rice Bran Carrier Oil improves circulation, evens out skin tone, and minimizes the appearance of dark circles and puffiness around the eye area. It increases skin’s natural regeneration, encourages moisture retention, and soothes irritation.
- Used in hair, Rice Bran Carrier Oil repairs dryness, damage, and brittleness. It facilitates hair growth while preventing the premature development of grey hair.
- Used medicinally, Rice Bran Carrier Oil boosts immunity by facilitating the healing of wounds, enhancing cell regeneration, and increasing the body’s defense against toxins that may enter through the skin.

HISTORY OF RICE BRAN OIL

The predominant staple diet item for more than half of the world’s population, Rice is made up of several layers. Rice Bran Carrier Oil, also called Rice Bran Extract, is derived from the hard, brown, oily layer between the outer husk and the rice kernel inside. This part is more commonly referred to as the “Bran.”

Although it is difficult to pinpoint its exact country of origin, Rice is believed to have been cultivated in Eastern Asia, namely in India and China, as early as 7000 B.C. Historical

sources say that its cultivation gradually spread to Japan, Indonesia, Persia and then to the Mediterranean region approximately around 800 B.C. In 1647, Rice was brought to America, and in 1750 it was introduced to Brazil. Now, Rice is grown in more than 100 countries with almost 18,000 varieties, comprising approximately 25% of the world's food grain production. Asia, Africa and America are the most prominent continents in the production of Rice, with India and Thailand being the most successful countries in Rice Bran Oil production. The Rice crop as we know it today is said to have been developed from wild rice, which is believed to have originated in Australia.

According to Chinese legends, Shennong – the emperor of China and the inventor of Chinese agriculture – has been accredited with the domestication of this wild rice. Though initial archaeological evidence proposed that Rice was domesticated in China's Yangtze River Valley region, evidence of the genetics of Rice now suggests that the development of modern, domesticated Rice was initiated from a single domestication that took place in Ancient China's Pearl River valley region between 8200 and 13 500 years ago.

In many cultures, religions, and other belief systems, Rice is symbolic of good fortune, fertility, and prosperity. Accordingly, one of its well-known roles is its use in wedding ceremonies and rituals, where it is scattered on or near the bride and groom, often as they head to their honeymoon destination. In other cultures, grooms request their brides in varying degrees of formality to serve them pounded rice, often on a plate made of a banana leaf or on a handkerchief. In other cultures, wine made from Rice is served at weddings and at rice harvesting ceremonies, among other significant occasions.

Rice Bran Oil has been used for more than 2000 years throughout Asia. Today, it continues to be used for soap and skin cream manufacturing, especially in Japan, where the women who use it are known as Rice Bran Beauties, one of the highest compliments they can receive. Historically, Japanese Geishas would add the water that remained after washing rice to their baths after discovering its ability to cleanse, soften, moisturize, soothe, nourish, and smooth the skin, which slowed the look of aging and brightened the complexion. Aside from being used in their baths and to gently clean their natural wood floors, Rice Bran Oil was used to wash their faces and their hair, to name only two of countless other applications for this beneficial oil.

BENEFITS OF USING RICE BRAN OIL

The main chemical constituents of Rice Bran Carrier Oil are: **Oleic Acid, Linoleic Acid, Palmitic Acid, Stearic Acid, α -Linolenic Acid, Vitamin B, Vitamin E, Squalene, Coenzyme Q10, and Ferulic Acid.**

OLEIC ACIDS (OMEGA 9) are known to:

- Maintain the softness, suppleness, and radiance of skin and hair
- Stimulate the growth of thicker, longer, and stronger hair
- Reduce the appearance of aging, such as premature wrinkles and fine lines

- Eliminate dandruff and thereby support hair growth
- Boost immunity
- Exhibit antioxidant properties
- Prevent joint inflammation, stiffness, and pain

LINOLEIC ACIDS (OMEGA 6) are known to:

- Moisturize hair and promote its growth
- Facilitate wound healing
- Be an effective emulsifier in the formulation of soaps and quick-drying oils
- Exhibit anti-inflammatory properties
- Soothe acne and reduce chances of future outbreaks
- Promote moisture retention in skin and hair
- Make oils feel thinner in consistency when used in an oil blend, thus being beneficial for use on acne-prone skin

PALMITIC ACID is known to:

- Have emollient properties
- Soften hair without leaving a greasy or sticky residue
- Be the most common saturated fatty acid

STEARIC ACID is known to:

- Have cleansing properties that purge dirt, sweat, and excess sebum from hair and skin
- Be an ideal emulsifying agent that binds water and oil
- Help products remain potent when stored for long periods of time
- Condition and protect hair from damage without diminishing luster or making it feel heavy
- Have exceptional cleansing properties
- Soften skin

ALPHA-LINOLENIC ACID (OMEGA-3) is known to:

- Lessen inflammation
- Control blood clotting on the skin
- Soothe joint pain and ease stiffness to improve flexibility

VITAMIN B is known to:

- Prevent the signs of aging, such as wrinkles and fine lines
- Improve skin's moisture retaining ability
- Maintain hair's texture, color, and strength
- Regulate skin's pigment production and thus prevent hyperpigmentation
- Promote the faster healing of wounds

VITAMIN E is known to:

- Have antioxidant properties that slow the look of aging and boost circulation
- Repair scarred and blemished skin
- Prevent moisture loss from skin and hair
- Offer soothing relief to skin that has been burned
- Deeply cleanse pores and balance oil production

SQUALENE is known to:

- Exhibit antioxidant properties that protect the body against the appearance of aging
- Be chemically similar to the sebum found in human skin
- Regulate the production of sebum
- Soften and protect the skin
- Have excellent moisturizing properties

COENZYME Q10 is known to:

- Demonstrate antioxidant behaviour
- Make skin look younger by promoting collagen production to keep skin elastic
- Protect and repair the skin
- Rejuvenate the appearance of skin by stimulating skin cell activity that eliminates skin toxins

FERULIC ACID is known to:

- Demonstrate antioxidant behaviour
- Protect skin against the harsh effects of environmental elements
- Assist in skin regeneration
- Increase the stability and the effectiveness of vitamins C and E

Used topically, Rice Bran Carrier Oil works to improve circulation and even out skin tone by brightening the complexion, thus it is valuable for minimizing the appearance of dark circles and puffiness around the eye area. Deeply hydrating and rich in nourishing components, Rice Bran Oil protects mature skin from the appearance of wrinkles as well

as from damage caused by free radicals and overexposure to the sun as well as to other environmental elements such as cold temperatures, harsh winds, and pollution. It helps support skin health by increasing its natural regeneration, encouraging moisture retention, soothing irritation, and enhancing the appearance of the skin's surface, thereby working to prevent skin conditions such as eczema. Skin that is oily or acne-prone can also benefit from the application of Rice Bran Carrier Oil, as its fast-absorption allows it to soothe irritation quickly without clogging pores or adding oiliness. After deeply penetrating the skin, it leaves skin looking and feeling supple, silky, radiant, and youthful.

Used in hair, Rice Bran Carrier Oil repairs dryness, damage, and brittleness, contributing to hair's moisture and softness without leaving a heavy, greasy residue. It is known to facilitate hair growth while preventing the premature development of grey hair. Its high smoking point makes it a natural heat protectant. With its ability to eliminate irritation-inducing bacteria Rice Bran Oil promotes scalp health by soothing and preventing dandruff. By increasing circulation, it revives hair by promoting stronger and healthier growth.

Used medicinally, Rice Bran Carrier Oil boosts immunity by facilitating the healing of wounds. It does this by enhancing cell regeneration and increasing the ability of cells to protect the body against toxins and pathogens that may enter through the skin. The antioxidant properties of Rice Bran Oil allow the body to defend itself against various ailments.

As illustrated, Rice Bran Carrier Oil is reputed to have many therapeutic properties. The following highlights its many benefits and the kinds of activity it is believed to show:

- **COSMETIC:** Antioxidant, Anti-Inflammatory, Regenerative, Stimulating, Circulatory.
- **MEDICINAL:** Antioxidant, Anti-Inflammatory, Regenerative, Stimulating, Circulatory.

CULTIVATING AND HARVESTING QUALITY RICE BRAN OIL

Rice belongs to the family of Grasses and is the oldest cultivated plant in the world. Largely grown in tropical and subtropical regions, most of its production began in and continues to be in Eastern Asia, though major centers for cultivation are also found in America and Africa. The European countries that cultivate rice include Italy, Spain, and Portugal. Unable to withstand night frosts, Rice flourishes in a temperature range between 20 °C (68 °F) and 40 °C (95 to 104 °F). It requires heavy soil that contains clay and is rich in humus. For optimal growth, it requires high precipitation or irrigation. Rice cannot thrive in atmospheres with high humidity, as this causes the growth and spread of fungal and bacterial diseases in the final crop. Strong winds will also damage the crop, as they cause pollen dehydration, which, among other factors, is known to lead to sterility. Because Rice is extremely sensitive to inadequate water, fields must remain flooded; however, the availability of water differs depending on the growing environment.

Rice is cultivated in various ways around the world; however, in Asian countries, it often continues to be cultivated and harvested by its ancient method. This involves “Tilling” or breaking up the soil with the aid of a Water Buffalo, which draws a simple plough. Tractors and other machinery may also be used instead of Buffalo. Tilling ensures that the land is in the ideal condition for the Rice seedlings to grow, as it allows them to be planted in level soil at an equal depth. Tilling also controls the growth of weeds.

The next step is leveling the land, which involves smoothing out the earth. In Asia, this is commonly achieved by dragging a log over the field. This gives the seedlings an even bed that ensures that they are all immersed in an equal amount of water. Leveling the land prevents water from being wasted inside uneven pockets of soil and it ensures that there is no exposed soil. This allows for the crop to be more easily established, reducing the efforts required to maintain the growth of the crop. It leads to enhanced grain quality and an increased amount of yield.

Seedlings begin to germinate in seedbeds for up to 50 days, after which time they are established by being manually transplanted in wet fields that have been inundated either by rain or by another water source. As the Rice continues to grow, the irrigation of the fields is maintained by dikes or by hand watering.

When Rice is planted in dry soil, this is called **Direct Seeding**. This method is comprised of manually or mechanically propagating seeds that are either dry or pre-germinated. In environments with deep water or where soil is watered by rain, dry seeds are manually distributed onto the soil then thoroughly combined with the dry soil by ploughing. In areas that are irrigated, seeds are usually germinated before being distributed onto the soil.

Depending on the variety and the soil fertility, Rice plants can grow up to 1–1.8 m (3.3–5.9 ft) tall. Its leaves are long, slender, and lanceolate in shape with a parallel venation, meaning their veins are parallel to each other. Pollinated by the wind, Rice flowers grow in an arched branch with inflorescence that hangs down loosely and can grow up to 50 cm (12–20 in) long. The Rice plant forms “spikes” that consist of deciduous panicles containing the edible “**Seeds**” or grains of rice. Generally, Rice crops mature up to 150 days after being established, though this number varies depending on the plant variety.

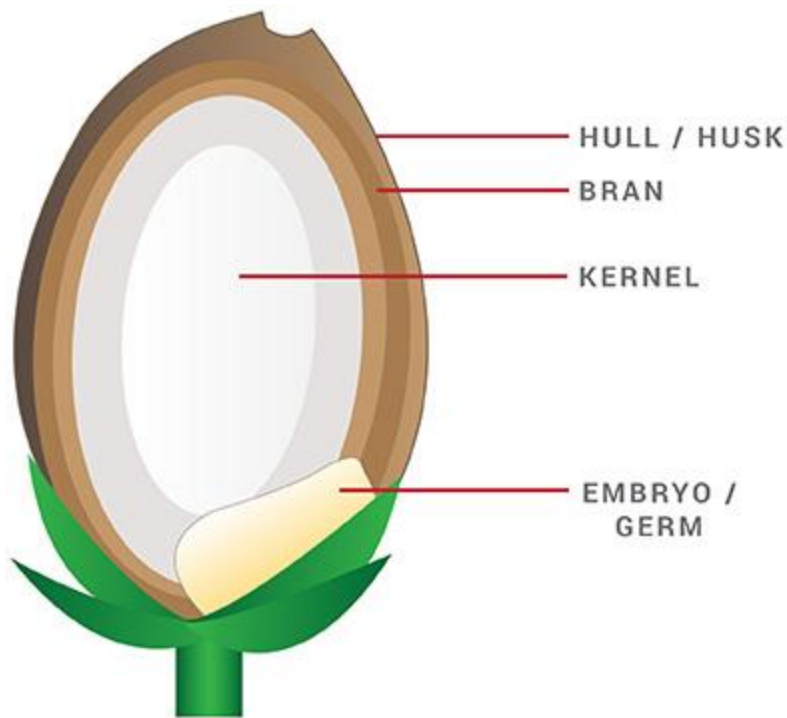
Harvesting can be done manually or mechanically and involves **Cutting** the crop above ground with sickles and knives, then **Hauling** the crop to another location where it will be **Threshed** to separate the grain from the stalk and other non-grain substances. The crop is often **Stacked** into piles until it is ready to be threshed. **Cleaning** the crop involves removing undeveloped and non-grain substances.

After Rice is harvested, a grain containing one rice kernel is referred to as a “paddy” that has several layers. The first layer is the **Husk** or the **Hull**, which is 2 half shells made of Silica and Cellulose. Each of these shells protects one half of the paddy. Coming together, they form one protective outer coating for the entire grain.

Under the husk, is a hard but thin, clear brown cover called the **Bran**. Composed largely of fiber, fat, protein, and Vitamin B complexes, this layer contains the most nutrients as well as over 75% of the grain’s oil content.

Removing the Bran layer exposes the innermost part of a grain known as the **Kernel**. This part is white, primarily composed of starch, and is often the image that comes to mind when the word “Rice” is mentioned.

Each grain contains an **Embryo** or the **Germ** at its base. If planted, this is what will grow into a new plant.



During processing, the harvested grains are first milled to get their hulls removed by a rice huller, leaving “brown rice.” If the Bran and the Germ are also removed, this creates “white rice.”

HOW IS RICE BRAN OIL EXTRACTED?

Rice Bran Carrier Oil is derived from the Bran of the Rice grains by both **Expeller Pressing and Solvent Extraction**.

After it is placed in an Expeller, the squeezing barrel’s inner screw presses the mass of Bran, causing it to release its oil. Freshly pressed Bran Oil trickles out through openings at the bottom of the barrel.

Throughout the pressing process, a Bran “press-cake” develops. This cake consists of solid Bran matter, and it remains inside the barrel, as it is unable to pass through the same openings as the pressed oil. Any remaining oil in the cake is extracted through the use of a food grade solvent such as Hexane.

Next, the Rice Bran Oil undergoes a process of mechanical refinement, which produces different grades of the oil. Typically, this process includes Filtering, Neutralization, Degumming, Decolorization, Deodorization, and Dewaxing.

Rice Bran Carrier Oil ranges in color from golden brown to brown. It may contain natural sediments that potentially contribute to its cloudy appearance; however, if preferred, it can be further filtered to eliminate the sediment before use.

USES OF RICE BRAN OIL

The uses of Rice Bran Carrier Oil are abundant, ranging from medicinal to cosmetic. Its many forms include oils, gels, lotions, creams, lip balms, soaps, scrubs, shampoos, and conditioners.

Used topically, Rice Bran Oil can be applied directly onto the face or the entire body to support the firmness and smoothness of mature skin and to protect skin against the harsh drying effects of the elements. For a full body moisturizer, Rice Bran Carrier Oil can be applied to damp skin immediately after a bath or shower to continue to keep the skin hydrated, soft, and protected. For a refreshing natural cleanser, Rice Bran Oil can be applied to a clean cotton pad then gently swiped across the face to remove dirt, oil, and makeup. Any of the oil that remains on the skin will plump the skin by boosting its collagen production, thereby smoothing out wrinkles without clogging pores. For a non-greasy exfoliating body scrub, Rice Bran Oil can be mixed with sugar or oatmeal and gently rubbed into the skin in a circular motion to stimulate circulation and boost cell regeneration for youthful, radiant skin.

For a fast-absorbing full body massage that tightens, moisturizes, brightens, and tones the skin, blend 120 ml (4 oz.) of Rice Bran Oil with up to 60 drops of a preferred essential oil. This massage will leave skin feeling silky rather than greasy. A massage with Rice Bran Carrier Oil also soothed wounded or inflamed skin and helps to relieve skin conditions such as dermatitis, eczema, and psoriasis.

Used in hair, Rice Bran Oil can be incorporated into a preferred natural shampoo or conditioner, or it can be applied directly to the scalp to moisturize, nourish, and soothe the strands and the scalp. For a hair mask that prevents the premature graying of hair, eliminates dandruff, and repairs split ends, blend 1/3 cup Rice Bran Oil with 1/3 cup of Hemp Seed Carrier Oil, between 5 and 10 drops of a preferred essential oil, and a hair conditioner of personal preference. After all the ingredients have been thoroughly mixed together inside a bottle, the blend can be applied to damp hair that has been towel dried. The mask is intended to be left on for 30-45 minutes under a shower cap and hot towel before being rinsed out. Hair will be left looking and feeling lustrous and strong. Alternatively, a small amount of the oil can be gently heated in a bowl and massaged into the scalp to revitalize hair and repair damaged strands while balancing the scalp's pH level.

Used medicinally, Rice Bran Oil can be applied directly to the skin to soothe any rashes or allergies characterized by inflammation and redness. For skin afflicted with eczema, it

creates a protective barrier that prevents further irritation. Rice Bran Oil can also be directly applied to wounds to speed up healing and to smooth out skin afflicted with roughness, bumps, scratches, and cuts.

A GUIDE TO RICE BRAN OIL & ITS BENEFITS

RICE BRAN CARRIER OIL

Botanical Name: *Oryza sativa*

Found in: India

Known for:

- Being rich in vitamins, minerals, proteins and essential oils.
- Containing a constituent called Oryzanol, which is safe to use in skin care formulations meant for outdoor use.
- Having very little scent characteristic of most carrier oils.
- Having a high percentage of fatty acids and unsaponifiables.
- Being one of the best sources of tocotrienols, an antioxidant that may be much more powerful and effective than Vitamin E.
- Being a mild oil perfect for dry, flaky, sensitive, mature and delicate skin (e.g. baby's skin), where additional moisture is required.
- Effectively keeping skin smooth.
- Adding moisture and sheen to hair without weighing it down.
- Providing lip conditioning and strong mold stability to lipsticks.
- Contributing smooth spreadability in nail polishes.
- Having a consistency that is typical and characteristic of carrier oils.
- Absorbing into skin at average speed.

CONTRAINDICATIONS FOR RICE BRAN OIL

As with all other New Directions Aromatics products, carrier oils are for external use only. Rice Bran Carrier Oil should not be ingested and should not be stored within the reach of children, in case of accidental ingestion. As with all other oils, a patch test should be conducted on the inner arm or other generally insensitive area of skin, using a dime size amount of Rice Bran Oil to check for sensitivities. An absence of an allergic response within 48 hours indicates that the oil is safe to use.

Potential side effects of Rice Bran Carrier Oil include flatulence, gas, changes in regularity, stomach discomfort, itching, rashes, and redness of the skin. The typical time frame of these reactions is generally within the first few weeks of using it, as the body requires time to adjust to the effects of Bran. In the event of an allergic reaction, discontinue use of the product and see a doctor, pharmacist, or allergist immediately for a health assessment and appropriate remedial action.

Individuals with anemia, intestinal ulcers, or conditions that cause difficulty swallowing or digesting may find that Rice Bran Carrier Oil aggravates their conditions. Rice Bran Oil is known to lower the body's blood calcium, which is advantageous for preventing the development of kidney stones. Contrarily, this property can make the oil unsafe for those with Osteoporosis or a type of calcium deficiency called Hypocalcemia. To prevent these side effects, consult with a medical professional prior to use.