

## TECHNICAL DATA SHEET

**Product Name:** Jamaican Black Castor Oil

**INCI Name:** Ricinus Communis Seed Oil

**CAS:** 8001-79-4

**Chemical Classification:** Fats and Oils

**Functional Category:** Skin and Hair Conditioner ~ Emollient

**Synonyms:** Black castor oil, Jamaican castor oil, Ricinus communis L., Castor Bean Oil, JBCO (short for Jamaican Black Castor Oil)

**Origin:** Jamaica

**Description:** Jamaican Black Castor Oil (JBCO) traditionally originates from Jamaica and represents a specific type of castor oil. It differs from standard castor oil in its processing method and appearance. The process of obtaining black castor oil begins with roasting castor seeds. During roasting, the seeds darken due to the caramelization of natural compounds and the combustion of certain substances. After roasting, the seeds are crushed to form a thick paste, which is then boiled in water. During boiling, the oil naturally separates from the paste and floats on the surface of the water, allowing for easy collection. Once collected, the oil is filtered to remove remaining impurities, resulting in a clean, almost black oil. The roasting process creates ash, which is the residue of burnt seed parts. The increased ash content contributes to the beneficial properties of the oil because the ash helps alkalize the oil. The alkaline nature of JBCO can "open" the hair cuticle, allowing nutrients from the oil to penetrate more deeply. The essential fatty acids, vitamins, and minerals present in JBCO can enter the hair shaft more effectively. This deeper nutrient penetration helps strengthen the hair structure, making it stronger and more resistant to damage, such as breakage or dryness. Additionally, when the oil penetrates deeply into the hair, it hydrates it from within, retaining moisture in the hair and making it more elastic. This gives hair a softer and healthier appearance, while the moisture retained by the oil reduces the effects of dry, brittle hair. As a result, regular use of products like JBCO can contribute to long-term hydration and hair vitality, while also reducing breakage and adding natural shine. HLB = 14.

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**Phytochemicals:** The oil is rich in triglycerides of various fatty acids (90% ricinoleic acid, 3-4% oleic acid, 3-4% linoleic acid). Ricinoleic acid is responsible for many unique properties of castor oil, including its anti-inflammatory, analgesic, and antimicrobial effectiveness. The oil contains oleic acid, an omega-9 monounsaturated fatty acid, and linoleic acid, an omega-6 polyunsaturated fatty acid. Additionally, the oil contains stearic acid, a saturated fatty acid that helps stabilize the oil and gives it a thick consistency. Castor oil also contains phytosterols, flavonoids (quercetin, kaempferol, and luteolin), and certain terpenoids (lupeol, beta-amyrin, and alpha-amyrin). Among vitamins, it contains Vitamin E, a powerful antioxidant that helps protect the skin from oxidative damage and contributes to its overall health.

### Benefits:

- Increased ash content contributes to the alkalization of the oil, enhancing its effectiveness.
- The alkaline nature of JBCO opens the hair cuticle, allowing better nutrient absorption.
- The oil reduces hair dryness and brittleness, making it softer and shinier.
- Helps stimulate hair growth.
- Deep hydration helps retain moisture in the hair and increases its elasticity.
- Improves scalp circulation, contributing to follicle health.
- Has antibacterial and antifungal properties, aiding scalp issues.
- Helps reduce skin inflammation and irritation.
- May help reduce dark spots and skin imperfections.
- Contributes to strengthening and hydrating eyebrows and eyelashes.
- Useful for hydrating and softening dry, cracked skin.

**Usage Instructions:** Jamaican Black Castor Oil is used in cosmetics as an oil for hair, skin, and nail care due to its moisturizing, regenerative, and stimulating properties. When used in hair products, it is often added in concentrations of 5% to 10%, as part of scalp treatments or hair masks, helping stimulate hair growth and strengthening hair. In body creams and lotions, it can be used in smaller concentrations of 2% to 5%, as it is very rich and easily absorbed, providing deep hydration. In eyebrow and eyelash products, it is usually used in its pure form or in combination with other oils at 100% concentration, applied directly to the hairs to strengthen and speed up their growth. In facial treatments, especially for dry or sensitive skin, it is used in concentrations of up to 5%,

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providing softness and protection from dryness. For external use only.

**Animal Testing:** This substance has not been tested on animals.

**GMO:** Non-GMO

**Vegan:** Does not contain animal-derived components



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