

TECHNICAL DATA SHEET

Product Name: Aronia Infused Oil

INCI Name: Aronia Melanocarpa Fruit Extract, Helianthus Annuus Seed Oil, Prunus Amygdalus Dulcis Oil, Tocopherol

CAS: 90131-13-2, 8001-21-6, 8007-69-0, 59-02-9

Botanical Name: Aronia melanocarpa

Chemical Classification: Mixture, Plant oil extract (lipophilic macerate)

Functional Category: Skin conditioning agent ~ occlusive, emollient, antioxidant

Maceration Type: Ultrasonic maceration, cold process

Production Method: Aronia infused oil is obtained by ultrasonic extraction using frequencies of 20-25 kHz. These ultrasonic waves create microscopic bubbles in the oil-extract mixture, inducing cavitation. This process results in extremely high pressure and temperature conditions in the microenvironment around the imploding bubbles, mechanically breaking down plant cell walls and releasing active constituents such as essential oils, flavonoids, carotenoids, and sterols. Extraction is carried out at 25°C to preserve heat-sensitive compounds. The carrier oils used are cold-pressed linoleic-type sunflower oil (rich in essential linoleic acid and lower in oleic acid) and sweet almond oil. Vitamin E is added as a natural preservative to maintain freshness and quality while ensuring the oil remains 100% natural. During the process, the vessel is cooled in an ice water bath to prevent temperature rise. Ultrasonic treatment is applied in short cycles with intervals. After processing, the oil is filtered to obtain a clear, usable product. This method is more efficient than traditional maceration, enabling better raw material utilization and shorter extraction time.

Description: The oil has a mild, natural aroma. Its color ranges from golden-yellow to reddish. On the skin, it acts as a gentle yet effective emollient, restoring the lipid barrier, improving elasticity, and softening the epidermis. It leaves no greasy residue and is lightweight, making it ideal for daily use. Thanks to its calming and protective properties, it is recommended for dry, mature, sensitive, and reactive skin. In anti-aging products, it neutralizes free radicals, evens out skin tone, and supports regeneration. Suit-

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.

TECHNICAL DATA SHEET

able for face, body, and hair care. It can be used as a stand-alone product or as part of the oil phase in emulsions, balms, serums, and massage oils. Its pleasant, medium-light texture allows easy blending with other plant oils, squalane, esters, and waxes. It does not cause irritation or skin tightness, making it suitable for children's cosmetics and sensitive skin formulations. Its high antioxidant content contributes to the stability of the final product, though additional tocopherol is still recommended to improve oxidative protection. It does not clog pores or cause comedogenic effects, making it beneficial for combination and oily skin, especially in balancing and regenerative formulas.

Bioactive Compounds: Aronia infused oil contains a broad spectrum of bioactive compounds. The most prominent are anthocyanins natural plant pigments from the flavonoid group-which give aronia its dark purple color and exhibit potent antioxidant activity. Key anthocyanins include cyanidin-3-glucoside, cyanidin-3-galactoside, cyanidin-3-arabinoside, and cyanidin-3-xyloside, which neutralize free radicals, reduce oxidative cell damage, and slow skin aging. Also present are proanthocyanidins (condensed tannins), which have anti-inflammatory effects, protect capillaries, and strengthen skin resilience. Flavonols like quercetin and myricetin further support anti-inflammatory and soothing effects, regulate oxidative stress, and aid skin renewal mechanisms. Phenolic acids such as chlorogenic and caffeic acid contribute antioxidant protection and stabilize cell membranes. Tannins, with their astringent properties, are beneficial for enlarged pores and reactive skin. Trace amounts of vitamin C (possibly in stable derivative forms) may support collagen synthesis and skin brightening. Altogether, these compounds protect skin from environmental stressors, accelerate tissue repair, and slow aging while promoting a refreshed, even complexion. The synergy of polyphenols, flavonoids, and anthocyanins makes aronia infused oil a potent natural phyto-complex with high regenerative potential.

Benefits:

- Nourishes and softens skin due to its fatty acid profile
- Protects cells from oxidative stress through natural antioxidants
- Restores lipid barrier and improves skin elasticity
- Soothes and reduces sensitivity in reactive skin
- Supports regeneration and evens tone in mature skin
- Absorbs quickly without greasy residue

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.

TECHNICAL DATA SHEET

- Non-comedogenic and does not clog pores
- Easily blends with other oils and emollients
- Enhances formulation stability thanks to phenolic compounds
- Suitable for daily care of all skin types, including children and sensitive skin

Usage: Aronia infused oil serves as an active functional ingredient in cosmetic formulations. In emulsions, it is typically used at 2–5%. In oil-based serums and balms, it can be included at 10–20%, depending on the desired texture and combination with other oils. In hair care products, the recommended range is 1–3%. For formulations targeting the delicate area around the eyes, up to 5% is advised. It should be added during the cold-processing phase to preserve antioxidants and natural color. Before use, it is essential to test for formulation stability and compatibility with emulsifiers and active ingredients.

Animal Testing: Not tested on animals

GMO Status: Non-GMO

Vegan: Contains no animal-derived ingredients

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.