

# Organic Sea Buckthorn Powder



## What is Organic Sea Buckthorn Powder?

**Organic Sea Buckthorn** — sourced from *Hippophae rhamnoides*, the legendary "Omega Berry" and "Super-Berry" of the Himalayan highlands — delivers the most nutritionally dense berry on Earth in three precision specifications tailored to every formulation need.

### The Unique Nutritional Power of Sea Buckthorn

Sea buckthorn occupies a singular position in the plant kingdom as **the only botanical confirmed to contain the complete Omega fatty acid spectrum — Omegas 3, 6, 7, and 9** — combined with an extraordinary Vitamin C content that exceeds oranges by **12 times** (825–1,100 mg per 100g). This remarkable nutritional density, cultivated in high-altitude pristine environments without synthetic pesticides, makes sea buckthorn one of the most compelling "beauty-from-within" and functional health ingredients available to formulators.

### Three Specifications to Meet Every Need:

**Berry Powder (Whole Fruit Powder)** — Full-Spectrum Format: Freeze-dried or air-dried whole berries (pulp + skin + seed oils), retaining the complete phytochemical matrix including rare **Omega-7 (palmitoleic acid)**, the full Omega 3/6/9 spectrum, carotenoids (beta-carotene, lycopene), superoxide dismutase (SOD), and fat-soluble nutrients. Rich, creamy, and intensely tart. Partially soluble (contains natural berry oils). Ideal for capsules, smoothies, and beauty bars.

**Juice Powder** — Water-Soluble Format: Cold-pressed, concentrated, and spray-dried pure sea buckthorn juice — focusing on water-soluble nutrients including Vitamin C, flavonoids (isorhamnetin, quercetin, kaempferol), and phenolic compounds. Bright golden-yellow, sharp, crisp, and zesty. Highly soluble

(excellent for liquids). Ideal for RTD beverages, gummies, and drink mixes. Note: a small amount of organic maltodextrin (typically 5–10%) is used as a carrier to ensure free-flowing stability.

**Fruit Extract** — Concentrated Functional Format: Water or hydro-ethanolic extract at standardized 4:1, 8:1, or 10:1 concentrations. Standardized to total flavonoids (isorhamnetin as marker compound, HPLC), concentrated in protective polyphenols. Yellow-brown fine powder at 80 mesh. Ideal for high-potency capsules, functional tablets, and precision dosage formats.

**Key Bioactive Compounds:**

- **Omega-7 (Palmitoleic Acid):** The rarest functional Omega — critical for mucosal membrane health, skin regeneration, and insulin sensitivity. Found almost exclusively in sea buckthorn and macadamia nuts.
- **Omega-3 (Alpha-Linolenic Acid):** Essential fatty acid supporting anti-inflammatory responses and cardiovascular health.
- **Vitamin C (825–1,100 mg/100g):** 12× oranges by weight — among the highest natural food sources on Earth.
- **Flavonoids:** Isorhamnetin, quercetin, and kaempferol — concentrated in the juice and extract formats.
- **Carotenoids:** Beta-carotene and lycopene — responsible for the distinctive deep orange color and antioxidant protection.
- **Superoxide Dismutase (SOD):** Rare antioxidant enzyme supporting cellular defense against oxidative stress.

**Health Positioning:**

- **Beauty-from-Within & Skin Glow:** Omega-7 and high Vitamin C support collagen synthesis and internal skin hydration
- **Immune Defense:** Natural high-dose Vitamin C and flavonoids support seasonal immune resistance
- **Mucosal & Gastrointestinal Health:** Traditional use for supporting stomach and respiratory tract linings
- **Anti-Inflammatory Support:** Unique fatty acid combination helps manage systemic inflammation
- **Natural Coloring & Flavor:** Provides stunning natural sunset-orange color and sophisticated "super-tart" flavor

**Physical & Chemical Specifications**

**Product Specifications Comparison**

Parameter	Berry Powder (Whole Fruit)	Juice Powder	Fruit Extract
Latin Name	<i>Hippophae rhamnoides</i>	<i>Hippophae rhamnoides</i>	<i>Hippophae rhamnoides</i>
Source	100% Whole berry (pulp + skin + seed oils)	100% Sea buckthorn juice	100% Sea buckthorn fruit
Processing	Freeze-dried or air-dried & milled	Cold-pressed → concentrate → spray-dried	Water or organic ethanol extraction
Extract Ratio	1:1 (whole berry)	1:1 (juice concentrate)	4:1, 8:1, or 10:1
Standardization	Naturally occurring (full spectrum)	Naturally occurring (water-soluble focus)	Total flavonoids (as isorhamnetin, HPLC)
Vitamin C	High (825–1,100 mg/100g)	High (825–1,100 mg/100g)	Concentrated (proportional to ratio)
Omega Profile	Full spectrum: 3, 6, 7, 9 (high)	Moderate (water-soluble focus)	Concentrated lignans + flavonoids
Omega-7 (Palmitoleic)	☐ Present (significant amounts)	Moderate	△ Low (water-soluble focus)
Flavonoids	Moderate	High (isorhamnetin, quercetin, kaempferol)	☐ High concentration
Carotenoids	High (beta-carotene, lycopene)	Moderate	Moderate
SOD (Superoxide Dismutase)	☐ Present	Present	Limited
Carrier	None	Organic maltodextrin (5–10%)	None
Appearance	Deep vibrant orange / opaque	Bright golden-yellow / fine powder	Yellow-brown fine powder
Flavor Profile	Rich, creamy, intensely tart	Sharp, crisp, zesty	Concentrated tart with mild bitterness
Mesh / Particle Size	80–100 Mesh	80–100 Mesh	80 Mesh
Solubility	Partially soluble (natural berry oils)	Highly soluble (excellent for liquids)	Good solubility in water/hot water
pH (1% solution)	2.5–3.5 (naturally acidic)	2.8–3.5	4.0–5.5
Moisture	≤5%	≤4%	≤5%
Ash Content	≤4%	≤3%	≤5%
Dietary Suitability	Vegan, Gluten-Free, Non-GMO, Organic	Vegan, Gluten-Free, Non-GMO, Organic	Vegan, Gluten-Free, Non-GMO, Organic
Shelf Life	18–24 months	18–24 months	24 months

Parameter	Berry Powder (Whole Fruit)	Juice Powder	Fruit Extract
Recommended Storage	<25°C, vacuum-sealed, light-proof, moisture-barrier	<25°C, airtight, cool dark place	<25°C, airtight, protect from light

## Key Bioactive Compound Summary

Compound	Berry Powder	Juice Powder	Fruit Extract	Health Relevance
Omega-7 (Palmitoleic Acid)	☐ High	△ Moderate	△ Limited	Mucosal health, skin regeneration, insulin sensitivity
Omega-3 (ALA)	☐ High	△ Moderate	△ Limited	Anti-inflammatory, cardiovascular
Omega-6 (Linoleic Acid)	☐ High	△ Moderate	△ Limited	Skin barrier function
Omega-9 (Oleic Acid)	☐ High	△ Moderate	△ Limited	Cardiovascular health
Vitamin C	☐ 825-1,100 mg/100g	☐ 825-1,100 mg/100g	☐ Concentrated	Immune, collagen, antioxidant
Isorhamnetin	☐	☐ High	☐ Standardized	Anti-inflammatory, hepatoprotective
Quercetin	☐	☐ High	☐	Antioxidant, anti-inflammatory
Kaempferol	☐	☐ High	☐	Antioxidant, anti-aging
Beta-Carotene	☐ High	☐ Moderate	☐	Antioxidant, skin health
Lycopene	☐	☐	☐	Antioxidant, prostate health
Superoxide Dismutase (SOD)	☐	☐	△ Limited	Cellular antioxidant defense

## Microbiological & Contaminant Standards

Test	Specification	Method
Total Plate Count	≤100,000 cfu/g	ISO 4833
Yeast & Mould	≤1,000 cfu/g	ISO 21527
E. coli	Negative/10g	ISO 16649
Salmonella	Negative/25g	ISO 6579
Coliforms	≤100 cfu/g	ISO 4832
Staphylococcus aureus	≤100 cfu/g	ISO 6888

Test	Specification	Method
<b>Aflatoxins B1, B2, G1, G2</b>	<4 ppb total	HPLC-FLD
<b>Ochratoxin A</b>	<10 ppb	HPLC-FLD
<b>Lead (Pb)</b>	<1 ppm	ICP-MS
<b>Arsenic (As)</b>	<2 ppm	ICP-MS
<b>Cadmium (Cd)</b>	<0.5 ppm	ICP-MS
<b>Mercury (Hg)</b>	<0.1 ppm	ICP-MS
<b>Pesticide Residues</b>	Not detected (EU MRL)	LC-MS/MS
<b>Residual Solvents</b>	<200 ppm (ethanol for extract)	GC-ECD
<b>Gluten</b>	<20 ppm	ELISA R5 Mendez
<b>Maltodextrin (Juice Powder)</b>	≤10%	HPLC-RI

## Certifications

Certification	Berry Powder	Juice Powder	Fruit Extract
USDA Organic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EU Organic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-GMO Project Verified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vegan Certified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gluten-Free Certified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allergen-Free	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kosher Certified	<input type="checkbox"/> Available	<input type="checkbox"/> Available	<input type="checkbox"/> Available
Halal Certified	<input type="checkbox"/> Available	<input type="checkbox"/> Available	<input type="checkbox"/> Available
ISO 22000:2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HACCP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Applications

### Application Matrix

Application Category	Berry Powder	Juice Powder	Fruit Extract	Notes
<b>Capsules / Softgels</b>	<input type="checkbox"/> Full-spectrum Omegas	<input type="checkbox"/> Limited	<input type="checkbox"/> Primary choice	Extract for precision dosing
<b>RTD Beverages / Drinks</b>	<input type="checkbox"/> Oily ring risk	<input type="checkbox"/> Excellent solubility	<input type="checkbox"/> Water-soluble	Juice Powder preferred for clarity

ApplicationCategory	Berry Powder	Juice Powder	Fruit Extract	Notes
<b>Gummies / Chewables</b>	△ High acidity	☐ Bright tart flavor	☐ Concentrated	Juice Powder for flavor profile
<b>Beauty-from-Within Supplements</b>	☐ Omega-7 + Vit C	☐ Vitamin C focus	☐ Flavonoid concentration	All three formats suitable
<b>Immune Defense Formulas</b>	☐ Vitamin C + SOD	☐ Vitamin C + flavonoids	☐ Concentrated flavonoids	Juice Powder for highest Vit C
<b>Mucosal / Gut Health</b>	☐ Omega-7 mucosal support	☐	☐ Flavonoid (isorhamnetin)	Omega-7 format preferred
<b>Natural Food Coloring</b>	☐ Deep orange pigment	☐ Bright golden-orange	△ Yellow-brown color	Juice Powder for coloring
<b>Functional Food Bars</b>	☐ Rich flavor + Omegas	☐ Tart flavor	△	Combine Berry + Juice for balance
<b>Smoothies / Shakes</b>	☐ Rich creamy tart	☐ Bright zesty tart	☐ Dissolves well	Berry Powder for full nutrition
<b>Cosmetic / Topical</b>	☐ Omega oils + carotenoids	△ Limited	△ Limited	Berry Powder for topical oils

## Health Claim Support

Health Benefit	Key Compounds	Evidence Level
<b>Beauty-from-Within / Skin Glow</b>	Omega-7 (palmitoleic acid) + Vitamin C (collagen synthesis)	Traditional use + modern research
<b>Immune Defense</b>	Vitamin C 12x oranges + flavonoids (isorhamnetin, quercetin)	Human studies + traditional use
<b>Mucosal &amp; GI Health</b>	Omega-7 (membrane integrity) + flavonoids	Traditional use + modern research
<b>Anti-Inflammatory</b>	Omega-3/6/7/9 + isorhamnetin + quercetin synergy	In vitro + human studies
<b>Cardiovascular Health</b>	Omega-3 (ALA) + Omega-7 + antioxidants	Human studies
<b>Antioxidant / Anti-Aging</b>	Vitamin C + SOD + carotenoids + flavonoids	In vitro + animal studies
<b>Cognitive / Brain Health</b>	Omega-3 + antioxidants + isorhamnetin	Emerging research
<b>Liver Health</b>	Isorhamnetin (hepatoprotective)	Human studies
<b>Natural Coloring</b>	Carotenoids (beta-carotene, lycopene)	Food-grade natural color

## Formulation Guide

### Oil Stability & Absorption:

- Berry Powder contains natural berry oils (including Omega-7). For dry powder mixes, pair with organic hemp protein powder or organic FOS powder to aid fat absorption and maintain free-flowing texture.
- The natural oils in Berry Powder can cause an "oily ring" in clear beverages — Juice Powder is preferred for clear liquid applications.

### **Flavor Pairing:**

- Sea buckthorn is naturally very acidic (pH 2.5–3.5). Balance with sweet superfoods such as organic jujube date powder or organic goji berry powder for harmonious, palatable formulations.
- For beverages: Juice Powder's bright, sharp, and zesty profile pairs well with citrus or berry flavors.

### **Vitamin C Synergy:**

- As a natural whole-food Vitamin C source, sea buckthorn enhances absorption of other ingredients (e.g., organic grape seed extract).
- Vitamin C is heat-sensitive — for heated products, add during cooling cycle to preserve potency.

### **Color Applications:**

- Berry Powder provides deep, vibrant sunset-orange color (carotenoid-rich)
- Juice Powder provides bright golden-orange color (ideal for clear beverages)
- Extract provides yellow-brown color (less suitable as primary coloring agent)

## **FAQ**

### **Q: Does the Berry Powder contain the seed oil?**

A: Yes. Our Whole Berry Powder includes the pulp and skins, which contain significant amounts of the berry's natural oils — including the rare Omega-7 (palmitoleic acid), the complete Omega 3/6/9 spectrum, and carotenoid pigments. If you need only water-soluble nutrients, Juice Powder is the better choice.

### **Q: Is the Juice Powder 100% pure with no additives?**

A: Because sea buckthorn juice is naturally high in oils and acids, a small amount of organic maltodextrin (typically 5–10%) is used as a carrier to ensure the powder remains stable, free-flowing, and clump-free. This is standard industry practice for high-acid juice powders. The maltodextrin is organic-certified and gluten-free.

### **Q: Why is the color so intense and vibrant orange?**

A: The deep orange color comes from high levels of carotenoids — primarily beta-carotene and lycopene. This is a natural indicator of the powder's antioxidant potency and nutritional freshness. The Berry Powder is darkest (full-spectrum), while Juice Powder is bright golden-orange (water-soluble fraction). Extract Powder is yellow-brown due to flavonoid concentration.

**Q: How do you protect the Omega fatty acids from going rancid?**

A: We use vacuum-sealed, light-proof, and moisture-barrier packaging throughout the supply chain. We recommend storing in a cool, dark environment ( $\leq 25^{\circ}\text{C}$ ) to maintain the integrity of the fatty acids for the full 18–24 month shelf life. Berry Powder is most susceptible to oxidation due to its natural oil content — nitrogen flushing is used during packaging.

**Q: Is sea buckthorn safe for people with citrus or other fruit allergies?**

A: Sea buckthorn (*Hippophae rhamnoides*) is from the Elaeagnaceae family, not the Rutaceae (citrus) family. However, as with any new botanical ingredient, we recommend consulting with your regulatory team to assess allergen declarations and cross-contamination risks specific to your formulation and market.

**Q: What makes Omega-7 (palmitoleic acid) so special?**

A: Omega-7 (palmitoleic acid) is one of the rarest functional fatty acids in nature — found almost exclusively in sea buckthorn and macadamia nuts. It plays a critical role in mucosal membrane health (gut, respiratory, and urogenital tracts), skin regeneration and hydration, and insulin sensitivity regulation. Sea buckthorn is the only plant source that provides meaningful dietary quantities of Omega-7 alongside a complete Omega 3/6/9 spectrum.

**Q: Can sea buckthorn be used as a natural food coloring?**

A: Yes. Both Berry Powder and Juice Powder provide stunning natural orange colorants from carotenoids (beta-carotene and lycopene). Berry Powder produces deep, opaque sunset-orange tones; Juice Powder produces bright golden-orange hues suitable for clear or semi-transparent beverages. Extract Powder provides yellow-brown tones and is less suitable as a primary coloring agent.

**Q: What is the MOQ, and what shipping options are available?**

A: Minimum order quantity: 25 kg per specification. Free samples available via FEDEX, UPS, or EMS. Lead time: 10–20 business days. Payment methods: D/A, D/P, L/C, T/T, MoneyGram, Western Union, Credit Card. Departure ports: Qingdao or Tianjin.

## Packaging & Storage



### Packaging Specifications

Parameter	Specification
<b>Pack Weight</b>	25 kg net per bag/drum
<b>Bag Material</b>	Multi-layer kraft paper with food-grade polyethylene inner liner (Berry Powder: vacuum-sealed + light-proof)
<b>Bag Dimensions</b>	40 × 40 × 60 cm
<b>Tare Weight</b>	~300 g per bag
<b>Desiccant</b>	Food-grade silica gel included
<b>Oxygen Barrier</b>	Nitrogen flushing for Berry Powder (oil protection)
<b>Labeling</b>	Product name, batch number, net weight, best-before date, certifications

### Storage Conditions

Parameter	Specification
<b>Temperature</b>	<25°C (77°F) — cool, dark environment
<b>Humidity</b>	<60% RH
<b>Light</b>	Protect from direct sunlight (critical for Berry Powder — contains light-sensitive carotenoids and Omega oils)
<b>Air</b>	Airtight container after opening; reseal promptly
<b>Shelf Life</b>	Berry Powder & Juice Powder: 18–24 months; Extract: 24 months
<b>Extraction Stability Note</b>	Extract is more stable than raw powders — water extraction removes oxidizable oils, extending shelf life

For more information, please visit our website:

<https://www.organic-way.com/products/organic-sea-buckthorn-powder/>