

CyanthOx™

HEALTHY AGING



Healthy Aging

Aging is a multi-faceted process involving deterioration of metabolic homeostasis, chronic inflammation, and oxidative/reductive damages in cells and tissues.

CyanthOx™ a clinically proven extract derived from organic, wild-harvested Tibetan Sea buckthorn, has been found to help support cellular regeneration, cardiometabolic health, and healthy inflammatory response.





CyanthOx™, a Potent Source of Natural Proanthocyanidins

CyanthOx™ is extracted from an ancient plant grown in Tibetan Plateau called sea buckthorn. Through a billion years of evolution, sea buckthorn is found to contain a unique and rich combination of **polyphenols, proanthocyanidins, bioflavonoids**, which offer extensive natural health benefits.

Extraction Ratio

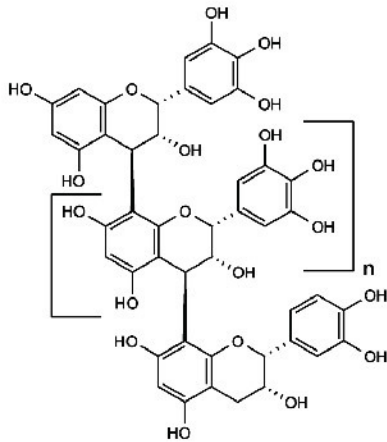
CyanthOx™ is obtained from sea buckthorn by using patented extraction technology. It takes 300 kg of sea buckthorn to produce 1 kg of **CyanthOx™**.



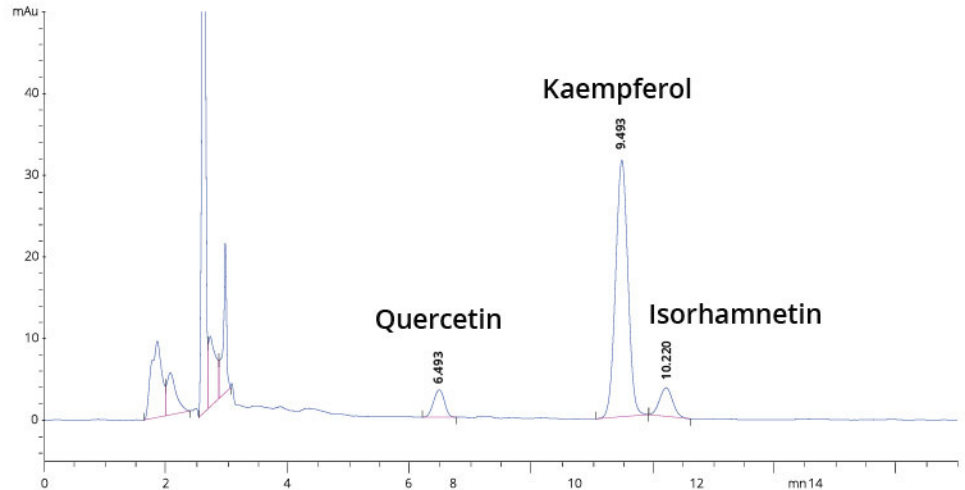
Composition of **CyanthOx™**

Different from other common Proanthocyanidins extracts in the market, such as French Pine Bark extract and Grape Seed extract, the majority of Proanthocyanidins is **Prodelphindin**, instead of **Procyanidins**.

In addition, **CyanthOx™** is also found to contain flavonoids such as quercetin, kaempferol and isorhamnetin.



Prodelphindin

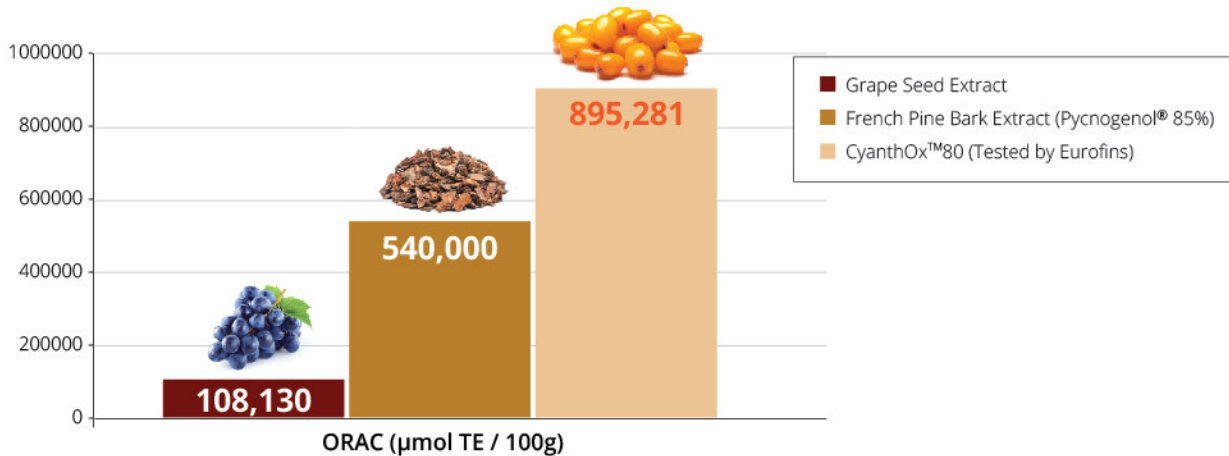


Super Antioxidant

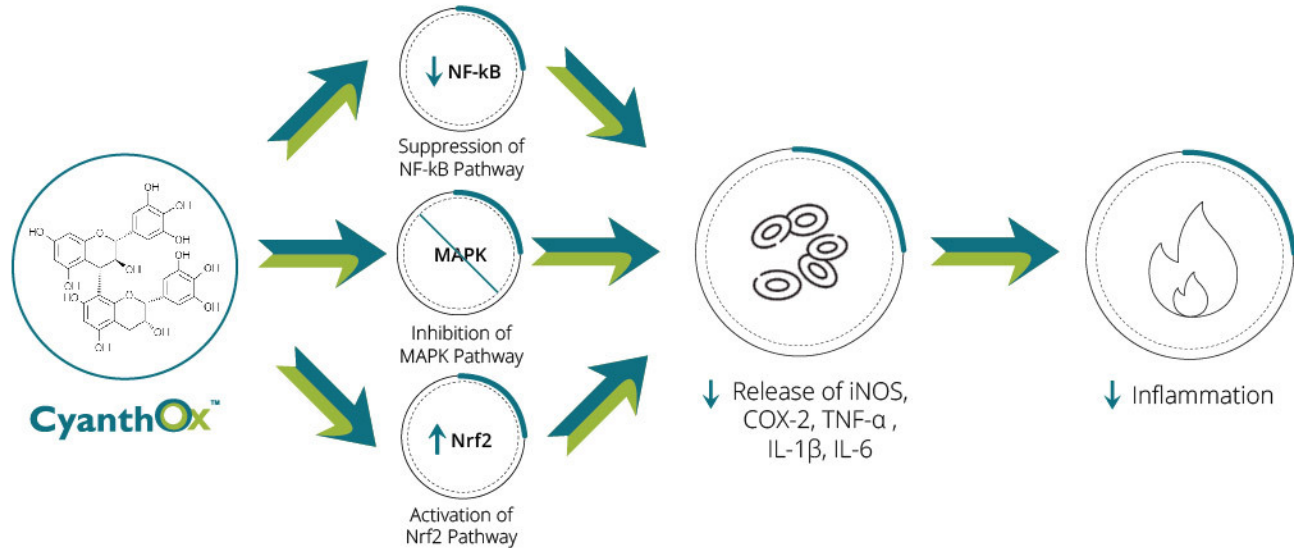
According to Oxygen Radical Absorbance Capacity (ORAC) analysis, which is a method of measuring antioxidant capacities in biological samples, **CyanthOx™** has an **ORAC value of 895,281 $\mu\text{mol TE}/100\text{g}$** (Puredia Corporation Limited, 2019).

In comparison, **CyanthOx™** is **8 times** and **1.7 times** more potent than grape seed extract (Superfoodly.com, 2019) and french pine bark extract (Legault et al., 2013) respectively.

ORAC Comparison



Mechanism of Action



1. NF-kB Pathway leads to cell death and inflammation.
2. MAPK Pathway leads to cell death, inflammation and tissue remodelling.
3. Nrf2 Pathway facilitates the expression of the cell-protective gene in response to oxidative stress and inhibits inflammation enzymes and cytokines.

Supports Cellular Regeneration, CardioMetabolic Health, and Healthy Inflammatory Response

Clinical Study

Design : Randomized, double-blinded, placebo-controlled,
12 healthy men and women

Dose: 500mg Daily Puredia SeaBerry® Proanthocyanidins (CyanthOx™30)

Result:

Consumption of CyanthOx™ leads to an increase in the following 3 types of stem cells:

- **Hematopoietic stem cell** – Formation of T-cells, red blood cells and white blood cells
 - **Endothelial stem cell** – Production of muscle cells, forming blood vessels and myocardial tissues
 - **Mesenchymal stem cell** – Generation of bone cells, cartilage cells, connective stromal cells and fat cells
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A Demonstrated Way of Action

Health Indications and Scientific Evidence

Hematopoietic stem cell

CD45- CD34+ CD309-

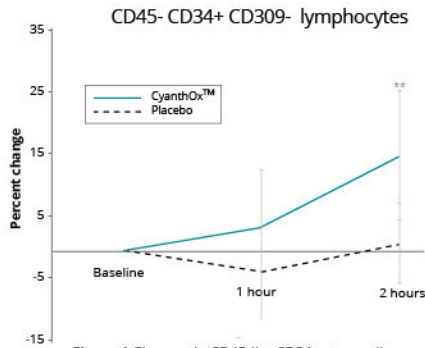


Figure 1 Changes in CD45dim CD34+ stem cells within 2 hours of consuming SBB-PE vs placebo.



Endothelial stem cell

CD45-CD31+CD309+

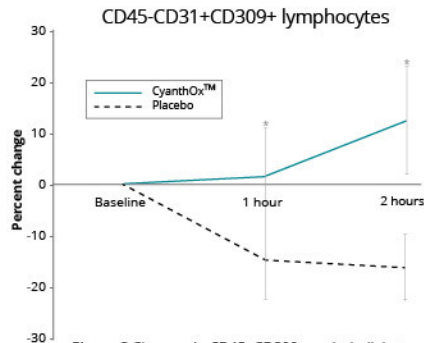


Figure 2 Changes in CD45- CD309+ endothelial stem cells within 2 hours of consuming SBB-PE vs placebo.



Mesenchymal stem cell

CD45- CD90+

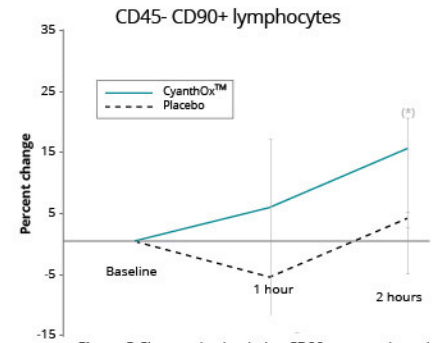
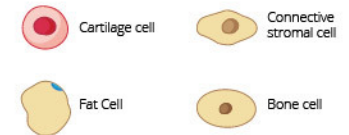


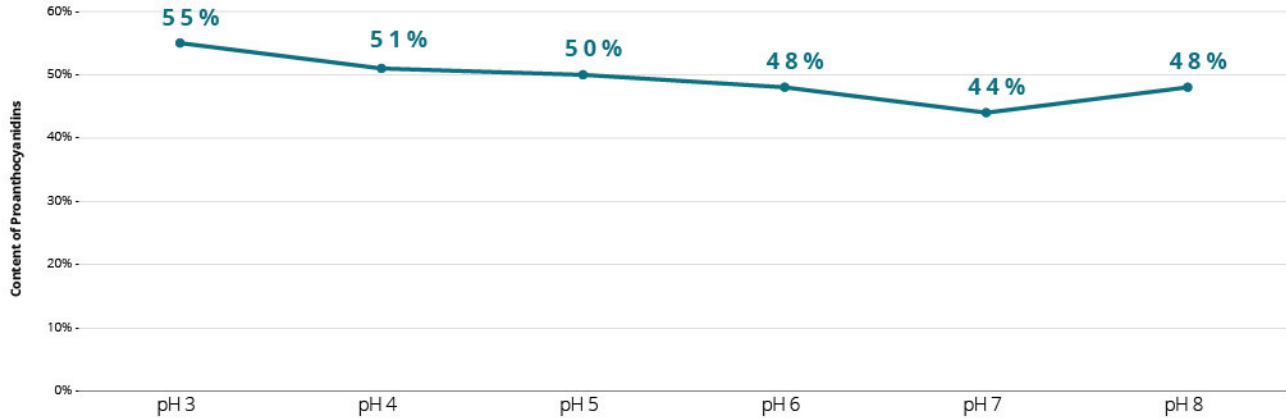
Figure 3 Changes in circulating CD90+ mesenchymal stem cells subpopulations.



pH Stability

The content of proanthocyanidins in **CyanthOx™** remains stable under both acidic and alkaline conditions.

pH Stability Test of CyanthOx™ 50



CyanthOx™ at a glance

Specification	Recommended Dosage	Grade
Proanthocyanidins 25% - 35%	500mg	Organic Grade
Proanthocyanidins 45% - 55%	300mg	
Proanthocyanidins 75% - 85%	188mg	
Proanthocyanidins ≥ 95%	158mg	Conventional Grade



Health Benefits

- Powerful antioxidant
- Enhances collagen production and cross-linkage
- Supports healthy lipid, blood sugar and nitric oxide levels
- Supports healthy retinal photo-oxidation response
- Promotes gastric ulcer recovery and intestinal integrity

Features

- Completely soluble in water, suitable for beverage application
- Excellent thermal stability and pH stability
- Patented extraction technology

Reference

- (1) Rapid and selective mobilization of specific stem cell types after consumption of a polyphenol-rich extract from sea buckthorn berries in healthy human subjects. tert-butyl hydroperoxide-induced cytotoxicity in lymphocytes. *J Med Food*. 2009;12(1)
- (2) Superfoodly.com. (2019). Antioxidant ORAC Value: Grape Seed Extract. [online] Available at: <https://www.superfoodly.com/orac-value/grape-seed-extract/>.
- (3) Legault, J., Girard-Lalancette, K., Dufour, D. and Pichette, A. (2013). Antioxidant Potential of Bark Extracts from Boreal Forest Conifers. *Antioxidants*, [online] 2(3), pp.77-89. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4665433/>.
- (4) Sugimura, R., Jha, D., Han, A., Soria-Valles, C., da Rocha, E., Lu, Y., Goettel, J., Serrao, E., Rowe, R., Malleshaiah, M., Wong, I., Sousa, P., Zhu, T., Ditadi, A., Keller, G., Engelman, A., Snapper, S., Doulatov, S. and Daley, G. (2017). Haematopoietic stem and progenitor cells from human pluripotent stem cells. *Nature*, [online] 545(7655), pp.432-438. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/28514439>.

GROWN IN THE TIBETAN PLATEAU



Puredia SeaBerry® is individually handpicked from our 23,000-acre farm which lies 4,500m (15,000 ft) high on the Qinghai Tibetan Plateau in Eastern China. Sourced from one of the cleanest environment in the planet, the unique set of climatic conditions combined with technological innovation sets our SeaBerry apart and makes our products pure and potent.



Grown in Pollution-free Tibetan Plateau

Scientifically proven to contain higher nutritional value than sea buckthorn grown in other places due to extreme growing environment, i.e. Continuous sunlight exposure, extreme temperature difference, minimal rainfall and high level of soil salinity and acidity.



Extracted by Supercritical CO₂ Extraction

Solvent-free and low temperature extraction technique retains all the richest nutrients without any loss.



Fresh Berries Supply All Year Round

Stored in frozen conditions which allow us to provide consistent supply throughout the year even in non-harvest season.



Worldwide Certified

Striving for the highest degree of quality and safety is always our utmost priority. Our farm is organic certified by USDA, EU and China and Non-GMO certified. Moreover, our state-of-art pharmaceutical grade production facility is certified with NSF GMP, ISO9001, ISO14001, ISO22000, HACCP, BRC, Halal and Kosher.

Puredia never uses any pesticides, fertilizers or chemicals and fully complies with both organic and wild harvesting procedures to maintain environmental and sustainable practices

