

CassiPure® is a concentrated
anti-oxidant extract

CassiPure®

ANTHOCYANIN RICH BLACKCURRANT EXTRACT



CassiPure®

is a concentrated anti-oxidant extract from one of the worlds true super-fruits, the blackcurrant, or Cassis berry (*ribes nigrum*).

Concentrated Phytonutrition

This small, dark purple, berry is packed full of bioactive plant (phyto)nutrients, including high levels of anthocyanins, a group of well researched anti-oxidant polyphenols with many potential health benefits. It is the anthocyanins in blackcurrants which give the berry its characteristic dark purple colour.

Although grown worldwide, New Zealand is recognised as one of the premier growing regions for blackcurrants, producing fruit with exceptionally high levels of phytonutrients developed naturally as a protective mechanism against the very high local levels of UV light. It is from these high quality, New Zealand grown, blackcurrants that CassiPure® is manufactured.

Multiple Health and Wellness Benefits

CassiPure® is a concentrated source of anthocyanin polyphenols which are known to have powerful anti-oxidant as well as anti-inflammatory activity ^{1,2}.

Anthocyanins, through their effects on oxidative damage and chronic inflammation have been shown to have potentially beneficial effects for **eye, heart** and **skin health, cognitive function, immunity** and **exercise performance** and **recovery**.

CassiPure® is standardised to 35% anthocyanin content.

Anti-oxidant Activity Reduces Oxidative Stress

During the course of normal metabolic functions damaging free radicals and reactive oxygen species are produced. The body has developed protective systems to deal with these molecules, however additional exposure to factors such as UV light and environmental pollutants can overwhelm the bodies' natural anti-oxidant capabilities, resulting in oxidative stress. It is this state of oxidative overload that has been implicated in many chronic conditions such as Parkinsons disease, Alzheimers disease, and Atherosclerosis.

The study of potent anti-oxidants, such as the anthocyanins found in CassiPure®, and their ability to mitigate the damaging effects of oxidative stress and inflammation in chronic disease, as well as enhancing athletic performance, is an area of increasing scientific focus.

Anthocyanin concentrates from blackcurrants have demonstrated neuroprotective effects in models of Alzheimers disease and Parkinsons disease³, have shown positive effects on endothelial dysfunction (an early indicator of the development of atherosclerosis) in adult subjects with hyperlipidaemia⁴, and have demonstrated cholesterol and blood sugar lowering effects in animal models^{5,6}.

Other research has focused on potential improvements in patients with the eye disease Glaucoma following supplementation with anthocyanin concentrate from blackcurrant^{7,8}.

Supplementing with blackcurrant extract can help to reduce the oxidative damage to muscles following exercise, assisting in recovery and overall athletic performance⁹.



CassiPure[®]

CassiPure[®] Advantages

- Concentrated source of antioxidant anthocyanins (35%)
- New Zealand grown fruit extract
- 100% water soluble
- Non GMO
- Non irradiated
- No additives
- Suitable for tablets or capsules

CassiPure[®] Profile

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|--|---|
| Raw Material: | New Zealand grown blackcurrant berry pomace (<i>ribes nigrum</i>) |
| Standardised anthocyanin content: | 35% |
| Physical Characteristics | Dark purple to black powder |
| Packaging: | Heat sealed foil laminate bag in lined cardboard carton. |

¹ Diaconeasa Z., et al., Anti-proliferative and antioxidant properties of anthocyanin rich extracts from blueberry and blackcurrant juice. *Int. J.Mol.Sci.* 2015; 16:2352-2365.

² Bonarska-Kujawa D, et al., Biological activity of blackcurrant extracts (*ribes nigrum* L.) in relation to erythrocyte membranes. *BioMed Research International*, 2014;783059.

³ Rehman S.U., et al., Anthocyanins reversed D-galactose induced oxidative stress and neuroinflammatory mediated cognitive impairment in adult rats. *Mol neurobiol*, 2016;Jan 6.

⁴ Zhu Y, et al., Purified anthocyanin supplementation improves endothelial function via NO-cGMP activation in hypercholesterolemic individuals. *Clinical Chemistry*, 2011; 57:11:1524-1533.

⁵ Benn T, et al., Polyphenol rich blackcurrant extract exerts hypocholesterolemic and hypoglycaemic effects in mice fed a diet containing high fat and cholesterol. *Br. J. Nutr.* 2015. June 14;113(11):1697-1703.

⁶ Jurgonski A., et al., Polyphenol-rich extract from blackcurrant pomace attenuates the intestinal tract and serum lipid changes induced by a high-fat diet in rabbits. *Eur. J. Nutr.* 2014;53:1603-1613.

⁷ Ohguro H., et al., Two-year randomized, placebo-controlled study of black currant anthocyanins on visual field in glaucoma. *Ophthalmologica*, 2012; 228:26-35.

⁸ Yoshida K., et al., Black currant anthocyanins normalized abnormal levels of serum concentrations of endothelin-1 in patients with glaucoma. *Journal of Ocular Pharmacology and therapeutics.* 2013;29(5):480-487.

⁹ Lyall K.A. et al., Short-term blackcurrant extract consumption modulates exercise induced oxidative stress and lipopolysaccharide-stimulated inflammatory responses. *Am. J Physiol Regul Integr Comp Physiol.* 2009 Jul;297(1):R70-81