





Recommended use level: 1.0 to 3.0%

In the contemporary world, we are increasingly exposed to external agents such as pollution and UV radiation, and the skin suffers the most from this exposure. Against the stress and pressure of everyday life, people seek to do their part and minimize their impacts on nature, being more and more aware of the ingredients they are consuming and putting into their bodies.

To meet such demand, Beraca brings a technological and multifunctional ingredient that unites care for the nature, the search for natural ingredients, and the concern to minimize the signs of aging - Pro-Aging Sustainable Açaí

In connection with the worldwide trend, Beraca's Açaí Extract fits into the pro-aging concept: a more positive approach to aging and the promotion of being satisfied with one's experiences and appearances, as aging is part of life. In this concept, the intention is to use products that establish balance – hence, a holistic look at aging.

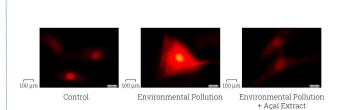
From the new ingredient, efficacy tests were conducted and Açaí Extract proved to be an important ally to reduce the signs of aging. Due to its nutritious composition and the presence of high concentration of oxidants such as anthocyanins, Açaí Extract is recommended for pro-aging products, with anti-glycation and anti-pollution action, attenuating wrinkles and improving the skin's vitality and brightness, also protecting it against external aggressions.

The new Açaí Extract is twice as interesting and suitable for the current demands of the market because besides having a higher concentration of actives, now the Beraca's Açaí is a Zero Waste ingredient, i.e., without any waste generated. With the full exploitation of the species, from a single raw material, all its parts are applied in different cosmetic ingredients - extract, oil and scrub.

	Antioxidant	
	Anti-pollution	Anti-glycation
Test type	in vitro	in vitro
Methodology	Mitochondrial ROS synthesis	AGE quantification
Evaluated cells	Human fibroblasts	Human fibroblasts
Extract concentration applied to cell treatment	100 mg/mL	100 mg/mL
Additional information	Fibroblasts subjected to environmental pollution simulation (Carbon Black Raven 410 – 0.01 mg/mL)	Fibroblasts subjected to UV radiation (10 J/cm2)

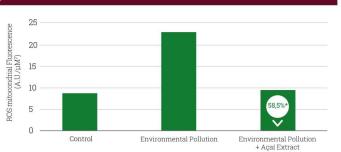
# **Antioxidant Activity**

## Anti-pollution



Evaluation of fluorescent micrograph of mitochondrial superoxide anion synthesis in human fibroblasts culture incubated with Açaí Extract at 100 mg/mL and subjected to Environmental Pollution with Carbon Black Raven 410 at 0.01 mg/mL.

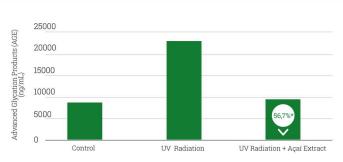
Note: the formed superoxide anion of mitochondrial origin is observed as reddish fluorescence



\*Statistical significance p <0.001 compared to Environmental Pollution

Semi-quantification of fluorescence relative to mitochondrial superoxide anion production revealed by oxidation of the MitoSOX $^m$ Red probe in human fibroblasts culture incubated with Açaí Extract at 100 mg/mL and subjected to Environmental Pollution (Carbon Black Raven 410 at 0.01 mg/mL).

## **Anti-glycation**



\*Statistical significance p<0.01 compared to UV Radiation

Effect of Açaí Extract at 100 mg/mL on the synthesis of Advanced Glycation End Product (AGE) in human fibroblasts culture subjected to UV Radiation (10  $J/cm^2$ ).

#### Indication

- · Sunscreens
- · Serums
- · Creams
- · Pro-aging lotions
- · Shaving and aftershave products

### **Properties**

- · Antioxidant activity
- $\cdot$  Anti-pollution activity
- · Anti-glycation activity
- · Promotes cellular balance

