

Pinna Leaf NP[™] A Natural Preservative with BioZymes[®] From Biofos Biotechnology



A paradigm shift from toxic chemical preservatives to 100% natural.

² Integrity Ingredients Corporation

"Your Innovation Partner"

Clean Beauty is Integrity Ingredients

Sustainable | Ethically Sourced | Socially Responsible | Transparent

"Advancing the Beauty with a Conscience Movement"

The Fusion of Clean Science with Bio-Active Naturals

At Integrity Ingredients Corporation, the fusion of clean science with nature has been at the center of our product innovation since 2005. For almost 20 years, our corporate mission has evolved to advance the pillars of the Beauty with a Conscience Movement – Sustainability, Ethical Sourcing, Social Responsibility and Transparency.

The Future of Natural and Biotechnology

As the demand for natural cosmetic products continues to increase, the pressure to sustain the supply of natural resources escalates. Biotechnology is emerging as a promising solution to address the sustainability challenges of natural resources. Due to advanced engineering techniques and cutting-edge scientific innovation, biotechnology can serve as an alternative for natural ingredients.

Today, scientists can produce specific compounds that are identical to those found in nature, but with greater efficiency and without depleting natural resources. And biotechnology can also create safe and effective, sustainable, cosmetic ingredients that are simply not available in nature. So therein lies the beauty of it all as Biotech and Nature can co-exist and ideally complement one another. Therefore, as biotechnology continues to advance, it has the potential to revolutionize the way we create innovation and consume clean, natural products, making them more sustainable for future generations.

Advancing the Beauty with a Conscience Movement

Today, Integrity Ingredients is taking sustainability to the next level in our quest to *Advance the Beauty with a Conscience Movement* by offering active ingredients and products for beauty and personal care that are produced with advanced biotechnology. *Learn more about our initiatives that are the cornerstone of our Sustainability and Social Responsibility endeavors.*

Integrity's Innovation and R&D Expansion

Our goal is to become "Your Innovation Partner", to expand your brand portfolio with products that highlight clean and sustainable innovation. We invite you to partner with us to create what is planned in your next Product Development cycle. We've expanded our R&D Team and have created a third R&D lab to accelerate the continuous development of unique formulas and finished products. Here are just a few of the services that IIC's Innovation and Marketing Teams provide:

- Ø Product Development from Concept to Commercialization
- Technology and Innovation Outsourcing
- Jechnology Development & Commercialization
- Research and Product Development
- Ø Product Innovation, Concept Development and Turnkey Products
- Ø Consumer, Industry Trend and White Space Analyses
- Market Research, Claims and Marketing Support and Regulatory Support

Integrity's Core Values and Strengths

We value green chemistry and sustainable production. At our core we excel at showcasing our latest ingredients and products that feature advances in Biotech, as well as Clean Science fused with Natural Bio-Actives. We offer safe alternatives for preservatives, emulsifiers, exfoliants, antioxidants, lipids, butters, waxes, enzymes and more. Our strengths lie in R&D, innovation, concept development and turnkey products. Also, as a courtesy, we offer extended services that include more than 30 years of marketing, market research and regulatory expertise. Our goal is to cultivate truthful, transparent, and empowering relationships as "Your Innovation Partner".

Join us on the journey to "Advance the Beauty with a Conscience Movement".

The Fusion of Clean Science with Nature

At Integrity Ingredients Corporation we distribute safe, non-toxic, non-irritating, ingredients and exclude the "free-from" ingredients that are ill-perceived by consumers. Our highest priority is to offer sustainable, ethically sourced, environmentally safe, pesticide-free materials that are organic, naturally derived or created with cutting-edge biotechnology.

Featuring Sustainable BioZymes® from Biofos Biotechnology

Our partner, Biofos Biotechnology has created unique personal care ingredients created from natural plant ingredients in combination with BioZymes®, a proprietary biotechnology. They positively impact the sustainability of the planet in two ways as they are created with 1) a sustainable, environmentally safe technology that is executed utilizing 2) a minimal number of plants.

Discover <u>here</u> our 100% Natural Preservative – Pinna Leaf NP[™] – A Sustainable, Environmental Solution

Pinna Leaf NP™ – a 100% Natural, Stand Alone Preservative

Biofos has combined natural BioZymes® with various botanical actives that provide a breadth of powerful functionalities for antiaging skincare, hair and scalp care, hair loss, baby products, oral care, natural preservatives and much more. The botanical actives in our 100% natural preservative, Pinna Leaf NP[™] are Colombian Bixa Orellana Seed Extract and Kalanchoe Pinnata Leaf Extract. When combined with BioZymes®, the fusion becomes a powerful, stand-alone, preservative that is a paradigm shift from toxic chemical alternatives.

Biofos – Advancing the Beauty with a Conscience Movement

Along with their work in biotechnology, Biofos is also vigorously engaged in advancing various socio-economically depressed Colombian communities. This is achieved through a coordinated effort with Dr. Patrice, a Colombian veterinarian who works directly with the people. She is highly accomplished with 25 years of experience in agriculture and environmental management and has earned a Master of Science in her field of expertise. Her work has integrated the cultivation and commercialization of diverse, indigenous Colombian plants for cosmetic use with local, community socio-economic development. *Learn more on page 4.*



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Pinna Leaf NP™ - a Biofos BioZymes® Biotechnology

- Ø Pinna Leaf NP™ a robust broad-spectrum preservation system.
- *Anti-microbial, gram-negative, gram positive, virus, yeast and mold resistant.*
- Ø Natural BioZymes® blends are combined with botanical actives to kill and inhibit the growth of microorganisms.



Kalanchoe pinnata leaf

- Highly effective.
- Safe, non-irritating.
- Formula stabilizing, environmentally neutral.
- 100% pure and natural.
- Ø Derived from sustainable biodiverse sources.

Pinna Leaf NP™ is a blend of specific active BioZymes® and botanical actives and antimicrobials:

Bixa orellana seed extract - Colombian annatto seed extract.

Kalanchoe pinnata leaf extract - The wonder plant from Columbia that provides anti-fungal and anti-viral resistance. BioZymes® - Protease, lipase

Free From:

- # Halogenated compounds
- 🥖 Quaternary ammonium
- Ø Formaldehyde donors
- Ø Phenoxyethanol
- Isothiazolinones
- Animal sources
- Ø Non-recombinant
- 🥖 Parabens
- 🥖 GMO's



Bixa orellana

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Pinna Leaf NP™ - a Biofos BioZymes® Biotechnology

BioZymes® are stable, non-irritating, pure, active enzymes, that are extracted by an exclusive sustainable BioFos™ Physiocell fractionation process.

The power of BioZymes® exponentially boosts botanical activity to deliver optimal performance at a minimal use level.

This is a significant factor to both eliminate irritation and to deliver cost effective natural products. Turn to page 6 for more details.

QUALITY CONTROL - QUALITY ASSURANCE



Bixa orellana seeds

- Ø Pinna Leaf NP™ meets PCPC challenge test standards.
- Ø Botanical activity is monitored throughout the Physiocell process to assure quality.
- A chain of custody is maintained on all botanical extracts and BioZyme® plant sources.

INCI: Bixa orellana seed extract, Kalanchoe pinnata leaf extract, Protease, Lipase

Antimicrobial	Anti Fungal	Antiviral	BioZymes ®
Bixa orellana seed extract	Kalanchoe pinnata leaf extract	Kalanchoe pinnata leaf extract	Protease
Kalanchoe pinnata leaf extract			Lipase

TTI - Technical and Testing Information

Description	Clear transparent liquid.	
рН	Ranges from 4.0 to 10.	
Use Level	2% (may vary 1% - 3% depending on formula). Need technical support? Let's talk.	
Protein Concentration	470 mg/dl minimum.	
Formula Stability	Does not affect viscosity and color.	
Solubility	Soluble in water and emulsions at room temperature.	
Storage	No special handling or refrigeration.	
Environmentally Neutral	Derived from sustainable, global biodiverse sources.	
Testing	Hundreds of formulas have been launched in South America for over a decade with no stability or irritation issues.	
US Testing	Formulas have been developed in the U.S., challenge tested per several protocols that include PCPC, USP and EP/BP and have passed with no issues. Product categories include cleansers, serums, lotions, creams, masks, and mascaras.	
Applications	Hair care, skin care, color cosmetics, baby products.	

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Biofos Advances Economically Depressed Communities

Biofos targets the most vulnerable communities to financially lift the women who have little to no income. They work in many Colombian areas that have different climates and ecosystems to help the local women to produce an array of plants that are uniquely diverse. One of their projects provides the means for these women to create their own home gardens not only to sustain their families, but to also market the surplus food, which is predominantley their only income source.

The Eco-restorers' Project for Sustainable, Regenerative Agriculture

Biofos created this project to support regenerative agriculture, which has a direct, positive environmental impact that ensures the health of the soil and water. The project initiatives were developed to:

- Purify the local drinking water and improve basic sanitation to substantially reduce skin and intestinal diseases, where the children are the most susceptible.
- # Establish family gardens at homes and near school cafeterias to sustain families, as well as village students.
- Ø Establish nurseries for the production and sale of the native plant materials.
- Assemble mini pens to raise broiler chickens that are managed by the local women.
- Assemble agroforestry and silvopastoral production systems which combine tree farming with livestock production that are adapted to each ecosystem.
- Implement agroecological production practices which are integrated, holistic methods that apply socio-ecological principles to the design and management of sustainable agriculture and food processing. This includes the use of green animal waste, microbiological broths, composting, vermiculture, as well as efforts to protect the soil and manage wastewater and water resources.
- Ø Provide complementary technical advice for each initiative above.
- Iltimately restore the Colombian degraded ecosystems and Advance the Beauty with a Conscious Movement.



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Pinna Leaf NP[™] - a Biofos BioZymes® Biotechnology

Pinna Leaf NP® with BioZymes® Featuring Physiocell Technology

Our partner, Biofos developed Physiocell technology, an ecological, non-chemical fractionation process that yields pure, unadulterated, stable, active BioZymes®. BioZymes® are proteins derived from amino acids folded into complex shapes that allow botanical actives to be transported through metabolic pathways as smaller molecules. Like classic enzymes, they are proteins that act as catalysts, to accelerate chemical reactions in the body, but in contrast BioZymes® are completely safe, non-irritating, and without side effects.

Physiocell technology collects and exponentially increases the bioactivity of plants and botanicals while preserving their biological power. Pinna Leaf NP®, is our 100% natural, polyenzymatic personal care preservative blend made up of botanicals and BioZymes®. The sustainable Physiocell technology extracts, purifies, and strengthens the BioZymes® in Pinna Leaf NP to intensify its performance and accelerate microbial reduction in personal care formulas.

BioZyme® Development Process

BioZyme® development is a proprietary process whereby the cultivated plants are harvested and transported in portable bioreactors within 24 hours to the biotechnology processing laboratory. Here the bioactive compounds are produced under Sustainability and Fair-Trade Criteria and are tested for stability and efficacy as a compound and in finished formulas.

BioZyme® Physiocell Technology



Stage II - Isoelectric separation of phytochemicals and plant enzymes using Natural Active Point Protectors (NABZPs) Stage III - Purification and removal of waste / inactive components Stage IV - Concentration of plant phytochemicals and enzymes

What Sets the Physiocell Process Apart?

Classic Enzymes	Physiocell Enzymes	
Synthetic or processed.	Natural enzymes derived from plants.	
Reactive to water, proteins, other enzymes, and compounds.	Poly-enzymatic complexes are purified, stabilized, and non-reactive.	
Sensitive to temperature and pH changes.	Adaptable and stable to temperature, pH, and processing.	
Known to cause irritation and allergic reactions.	Selected and buffered to be low in irritation and allergenic potential.	
Shelf life is typically 12 months as a dry powder.	Shelf life is typically 3 years in a water-based extract.	

Pinna Leaf NP®, our 100% natural preservative with BioZymes® is an excellent stand-alone system and may be used in skincare, hair care, color cosmetics, nailcare and body products. <u>Click or call to explore further</u>.

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CONTACT US

Integrity Ingredients Corporation 2255 Jefferson Street Torrance, CA 90501

Phone: (310) 782-0282 Toll Free: (877) 765-0282

Email: info@integrityingredientscorp.com

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