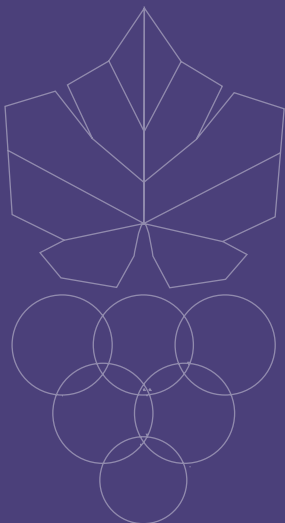




PLT
HEALTH SOLUTIONS



MegaNatural-BP[®]
grape seed extract—cardio health support



MegaNatural[®] Grape Seed Extracts

Sustainability Made in California, USA

Produced for PLT Health Solutions by:
Trish Flaster, MSc. and Blake Ebersole
Botanical Liaisons, LLC

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► Foreword

Sustainability is Necessary and Good for Our Industry

While twenty-five years ago it was not the case, it is almost a truism today that consumers and producers want their products to be sustainable. Consumer surveys show that over 80% of those asked would prefer a sustainably sourced and produced product. However, the situation becomes more complicated when we dive into what sustainability means exactly and whether people understand and are willing to pay for these products at the retail level.

Sustainability gained some definition with the creation of the 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015. This program provided a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs) that address a broad range of issues that affect what we call sustainability. It is a framework that PLT Health Solution embraces in our own work on sustainability.

At PLT, as a participant in the Natural Products industry, we see sustainability as necessary for three major reasons.

First, as a health and wellness company, we are committed to improving the lives of people and the planet we live on. In that sense, it is part of our company's DNA.

From a business perspective, being stewards of the environment is essential to PLT's future success. Plants are the raw materials of the ingredients we produce, and without sustainable growing and harvesting practices, we risk not having these plants available in the future.

Finally, as an innovation partner to some of the world's leading consumer products companies, we see sustainability as a business opportunity for our customers. There is good data to back this point up. Bain * Company surveyed consumers in

2023 and found that they were willing to pay a 12% premium on products identified as sustainable. A joint survey by McKinsey and Nielsen IQ in 2024 found that 60% of respondents would pay more for sustainable products and that growth rates for products with ESG claims were 8% higher than for products without the claims. A 2024 study by PwC found that consumers would pay 9.7% more for sustainable products – even during a challenging economy. These studies showed that sustainability also positively impacted both brand loyalty and repeat purchases.

One factor evident in all these surveys and cited as an impediment to the growth of spending on sustainable products was consumers' struggle to identify sustainable products and a lack of trust in corporations to make them. This points to a need for all of us in the Natural Products Industry to communicate better. We need to be more explicit, more often, and to focus on the value that sustainable products deliver.

This white paper is an attempt to help communicate the facts and the value of sustainability efforts on behalf of the California Natural Color line of grape seed extracts. As you will see, sustainability is an important part of the MegaNatural story. GALLO and its California Natural Color division are leaders in sustainable practices for land use, water use, energy use and social responsibility for employees when it comes to growing and harvesting grapes. I am personally impressed by their efforts in this area.

At PLT, we are excited to continue our work with Trish Flaster and Blake Ebersole of Botanical Liaisons in documenting sustainability and presenting their work in this whitepaper.

Sid Hulse

Vice President, Product Development
PLT Health Solutions

▶ Grape Seed Polyphenols

A range of important health benefits from sustainable winemaking

Wine, grapes, and grape constituents have been researched for their health-promoting properties, with suggestions of benefits to the cardiovascular system dating to at least 1970.

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Anatomy of a Grape

Grapes contain two major classes of polyphenols that contribute to health: flavonoids such as anthocyanins and the flavanols (epi)catechin and (epi)gallocatechin; and tannins, also known as proanthocyanidins. The seeds of grapes are especially rich sources of catechins and proanthocyanidins.

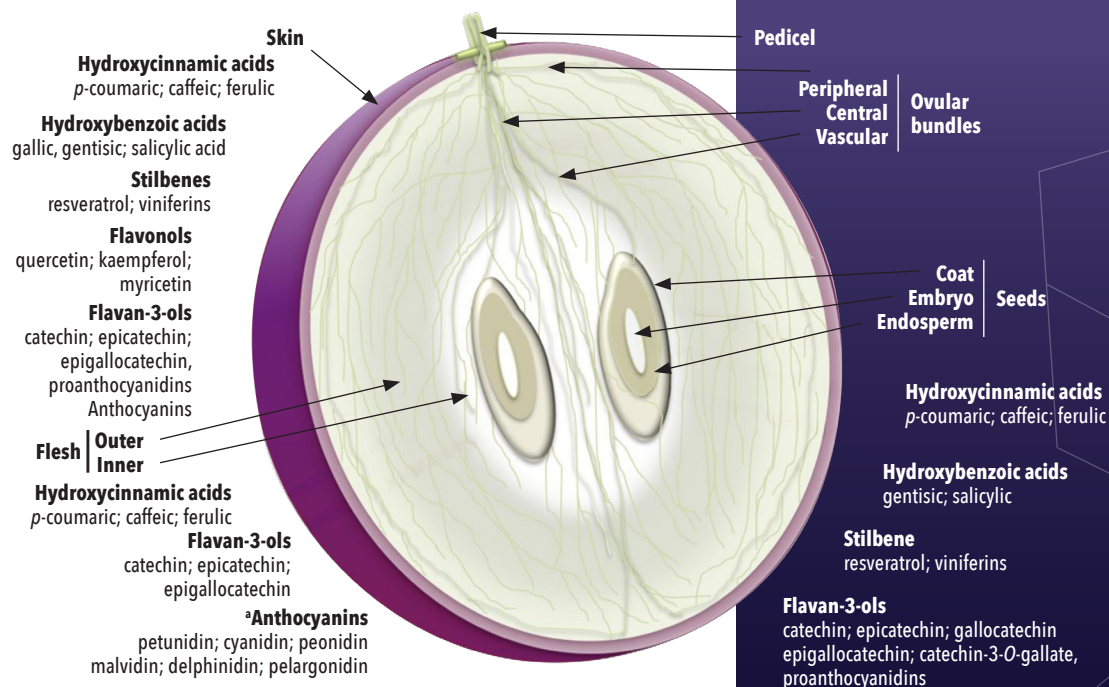


Figure adapted from Teixeira A, et al. *Int J Mol Sci.* 2013;14(9):18711-18739.

Grape Phenolics

In white wine and juice production, the juice is normally separated from skins and seeds. In essentially all red wine production, the berries are crushed and fermented. Therefore, the total phenol content of red wine is typically much higher than that of white wine, and it is rich in anthocyanins and other flavonoids. The most important flavanols in grapes are catechin and its enantiomer epicatechin, biosynthetic precursors of proanthocyanidins, which are responsible for the structure and astringency of wine.

Grape constituents have been researched for their health-promoting properties, with suggestions of benefits to the cardiovascular system dating to at least 1970.

- A general composition of the grape consists of
 - 2-6% stems
 - 5-12% skins
 - 80-90% juice
 - 0-5% seeds
- Averaging over several grape varieties, seeds account for about 4.4% of the total weight
- Monomeric and polymeric grape seed tannins (procyanidins)
 - monomeric flavan-3-ols (also called flavanols)
 - (+)- catechin
 - (-)-epicatechin
 - (-)-epicatechin-3-gallate



The health benefits of dietary phenolics are well documented. They protect us from external stimuli and help eliminate reactive oxygen species (ROS), which are instigators of several illnesses. By inhibiting the oxidation of LDL cholesterol, polyphenolic antioxidants may counteract the development of atherosclerosis while helping to improve lipid profiles, blood pressure, insulin resistance, and systemic inflammation. Consumption of flavan-3-ols—such as the catechins and proanthocyanidins found in grape seed extract, green tea, and cacao—has been associated with a decreased risk of heart attacks, strokes, and diabetes. Dietary polyphenols and proanthocyanidins also have supporting benefits for gut health and microbiome due to their antioxidant, anti-inflammatory, and prebiotic activities. Recent research has shown the synergistic or enhancement of probiotics in combination with dietary polyphenols such as GSP for supporting a healthy gut microbiome.

MegaNatural-BP® is a unique grape seed extract made in California from unfermented red and white varietal wine grape seeds.

Grape Seed Extracts made by California Natural Color

Through California Natural Color, PLT Health Solutions offers a broad range of different grape seed extracts (GSE) tailored to the specific formulation needs of its customers. Chief among these are MegaNatural-BP®, MegaNatural® Gold and ACTIVIN®. From the standpoint of total phenol content, these extracts are similar. But there are important differences that affect the functionality and application of these extracts. Each also has a different research portfolio that affects the types of benefit statements that can be made for the ingredient. The sustainability features of all California Natural Color grape seed extracts are identical. In this whitepaper, we will focus on MegaNatural-BP. For more information on other California Natural Color grape seed extracts, contact PLT Health Solutions.

MegaNatural-BP – Sustainable Cardio Health Support

MegaNatural-BP is a unique grape seed extract made in California from unfermented red and white varietal wine grape seeds. This clinically studied patented ingredient can be used as part of a healthy diet to help maintain healthy blood pressure regulation. Clinical studies show the efficacy of MegaNatural-BP at 150-300 mg per day. MegaNatural-BP is ideal for use in supplements, functional foods, and beverages. It is certified non-GMO by the Non-GMO Verification Project and water-soluble.

Safety studies showed no adverse effects for this clean-label ingredient solution. For more information on the science behind California Natural Color Grape Seed Extracts, inquire about the MegaNatural Scientific Summary.

The Patented Process

MegaNatural-BP was developed using a special patented process to reduce the molecular size of the polyphenols in the grape seed extract, providing more biologically active polyphenols that are standardized to a minimum polyphenol content. The grape seeds featured in MegaNatural-BP are extracted with hot water, purified, concentrated and spray-dried with no carrier, resulting in a high phenolic (94%), high ORAC grape seed extract powder without any preservatives.

All cleaned, sorted, and dried grape seeds are stored in silos for further processing on demand. Traceability of all grapeseed is assured through Enterprise Resource Planning systems, including SAP, and is documented back to the original vineyard source.

California Natural Color also adheres to many manufacturing practices required for dietary supplements, including strict requirements for assuring the identity, potency and purity of manufactured products

It should be noted that excess grape seeds not made into MegaNatural have traditional alternative uses such as food, feed, biofuel or fertilizer. The non-seed parts of the harvested grape berry include juice, including skin and pulp. As a result, the MegaNatural supply chain is nearly meeting targets to 'zero-landfill' goals for all grape cultivation.

Vertical Integration

As a division of GALLO, California Natural Color has access to an abundant supply of fresh wine grapes grown in California and retains control over the entire manufacturing process – from the initial selection of wine grapes to the final extraction of finished material. The company goes beyond federally mandated traceability requirements, documenting all aspects of growing, treating, and handling the varietal grapes. Through painstaking supply chain documentation and laboratory testing,

California Natural Color can substantiate freshness, identity, domestic origin, and absence of chemical contaminants and genetic modification.



As a result, the MegaNatural supply chain is nearly meeting targets to 'zero-landfill' goals for all grape cultivation.

► GALLO: 90 Years of Sustainability in the Vineyard

The sustainability of MegaNatural-BP begins with the insights, legacy and practices of founders Ernest and Julio GALLO in the 1930s. At that time, they established the 50/50 Giveback - a unique land management plan that set aside one acre to help protect and enhance wildlife habitat for every acre of land planted under vine in its premium vineyards.

Agricultural Environmental Monitoring Practices

In 2007 GALLO was recognized as the first winery in the U.S. to receive the International Standards Organization's ISO 14001 certification for Environmental Management Systems. The benefits of ISO 14001 certification include reducing environmental impact and improving environmental performance through a continual improvement framework.

The California Sustainable Winegrowing Alliance (CSWA).

More than twenty years ago, GALLO played a key role in initiating the California Sustainable Winegrowing Program and the Code of Sustainable Winegrowing Practices (CSWA). This program promotes vineyard and winery practices that are sensitive to the environment and responsive to society's needs and interests.

My grandfather Ernest and great uncle Julio GALLO always operated in the spirit of gratitude. We continue that commitment every day, whether giving back to the land, empowering our employees to make an impact, or innovating more sustainable practices.

Ernest J. GALLO, CEO,



MegaNatural® Grape Seed Extracts

PLT HEALTH SOLUTIONS

Introduced in 2010, Certified California Sustainable Winegrowing is a certification program that provides third-party verification. This verification includes stringent sustainable winegrowing standards based on the Industry's Code of 200+ best practices.

Vineyards and wineries must also meet an overall score threshold, measure and track metrics for water, energy, greenhouse gases and nitrogen, and comply with restrictions on crop-protection materials.

In 2023, CCSW became the first sustainable winegrowing certification to achieve Gold Level equivalence, the highest possible level, against the Sustainable Agriculture Initiative (SAI) Platform's Farm Sustainability Assessment (FSA) version 3.0. The FSA provides an internationally recognized framework for sustainable agriculture certification programs.

Sustainable Cultivation Practices

Through time, GALLO has developed the innovation, relationships, contracts, support and training with independent and company-owned vineyards, which require an extensive level of traceability and control over every aspect of the cultivation process.

The regionalized nature of the cultivation and winemaking areas under GALLO, mostly restricted to the central and coastal parts of California, and the small number of direct links in the supply chain, provide multiple advantages in measuring and optimizing sustainability metrics.

GALLO also closely controls and monitors vineyard land use history.

Because MegaNatural grape seeds adhere to the same processes as grape production for GALLO wines, MegaNatural is supported by the same extensive levels of data from field breaking and land history through harvest, processing and production.

Overall, more than 200 vineyard management best practices have been implemented, primarily focusing on land use, canopy management, energy efficiency, water use efficiency and carbon emissions.

100% of GALLO's California vineyards are certified sustainable under the California Sustainable Winegrowing Alliance under independent, globally recognized and peer-reviewed standards.



► Focusing on GALLO's Environmental Progress

Climate change

GALLO is committed to continuous improvement in reduced transportation-related greenhouse gas (GHG) emissions and adopted leading GHG best practices across its value chain.

Water conservation

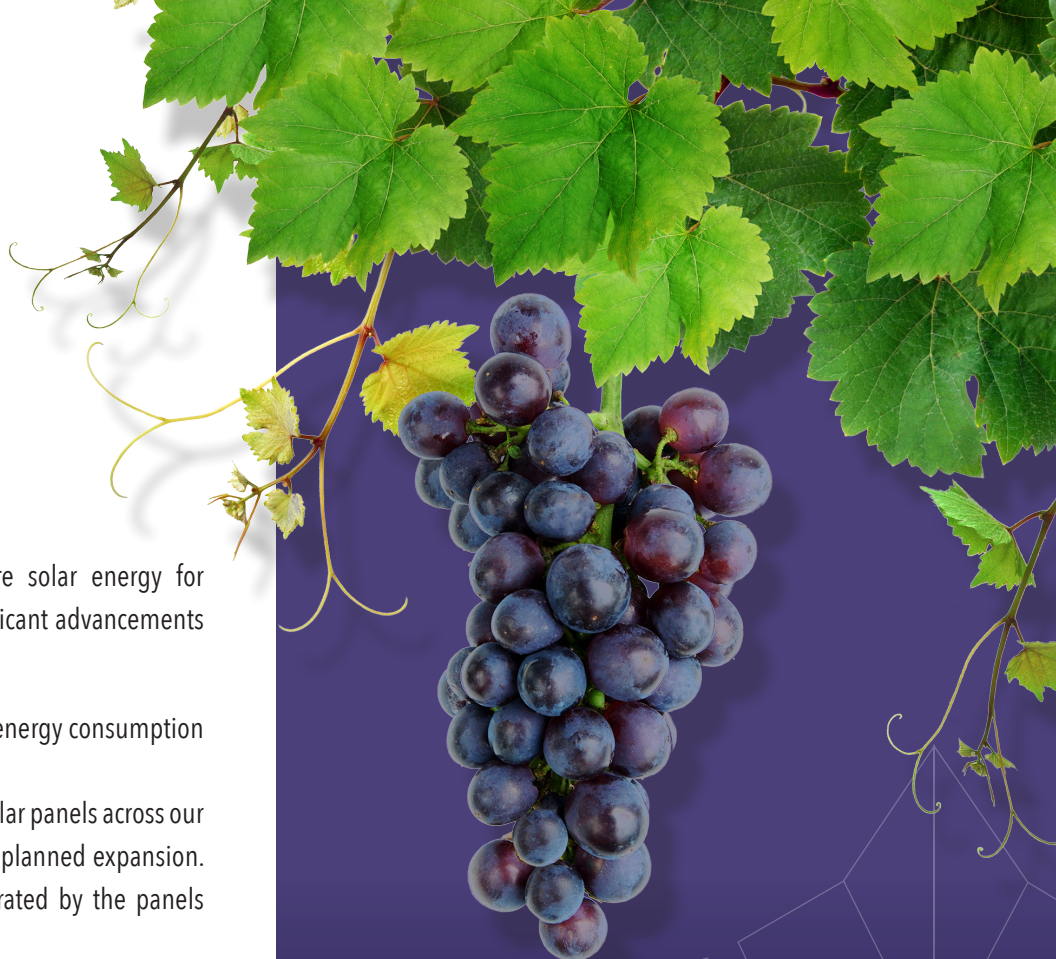
Grapes are grown in arid and semi-arid regions, and GALLO's history and success have been accomplished through addressing water as a valuable and scarce resource. Numerous water conservation practices are in place, including the following as notable:

- Achieved an industry-leading 3:1 water-to-wine ratio between 2020 and 2023.
- GALLO recycles and reuses process water. Water reduction practices are employed in the vineyards, and water reuse practices have been adopted in winery facilities.
- Practices that minimize runoff, preserve river habitats and create new wetlands support the re-establishing of endangered and threatened wetland species.



***GALLO employs 21 acres
of solar panel fields for
renewable energy sources,
which have generated
approximately 6,317 MWh***





Energy

GALLO's core raw material, grapes, require solar energy for production. GALLO brands have made significant advancements towards energy conservation, including:

- GALLO reports recent year's reductions in energy consumption of 35%
- The company has more than 21 acres of solar panels across our winery properties, as well as major future planned expansion. In 2023, roughly 6,317 MWh was generated by the panels under GALLO's ownership
- Approximately 13,566,104 kilowatt hours of renewable electricity generated annually - this includes solar, co-generation from biogas (treatment of process water), and turbine across all GALLO sites

Agricultural inputs

Decades ago, GALLO led the wine industry in improving Integrated Pest Management Practices. Today, GALLO vineyard program practices and policies effectively minimize the use of harmful chemicals.

Rigorous control systems monitor the use of all agricultural inputs. A prohibited list, along with close monitoring and annual inspections, deter the use of unapproved agricultural inputs

Non-chemical pest and weed controls have been adopted, Alternative pest management practices have been adopted, including ecologically sound pest management practices in the vineyards, such as employing sheep, barn owls and falcons for specific pest conditions.

► California Natural Color

Creating value from nature's bounty

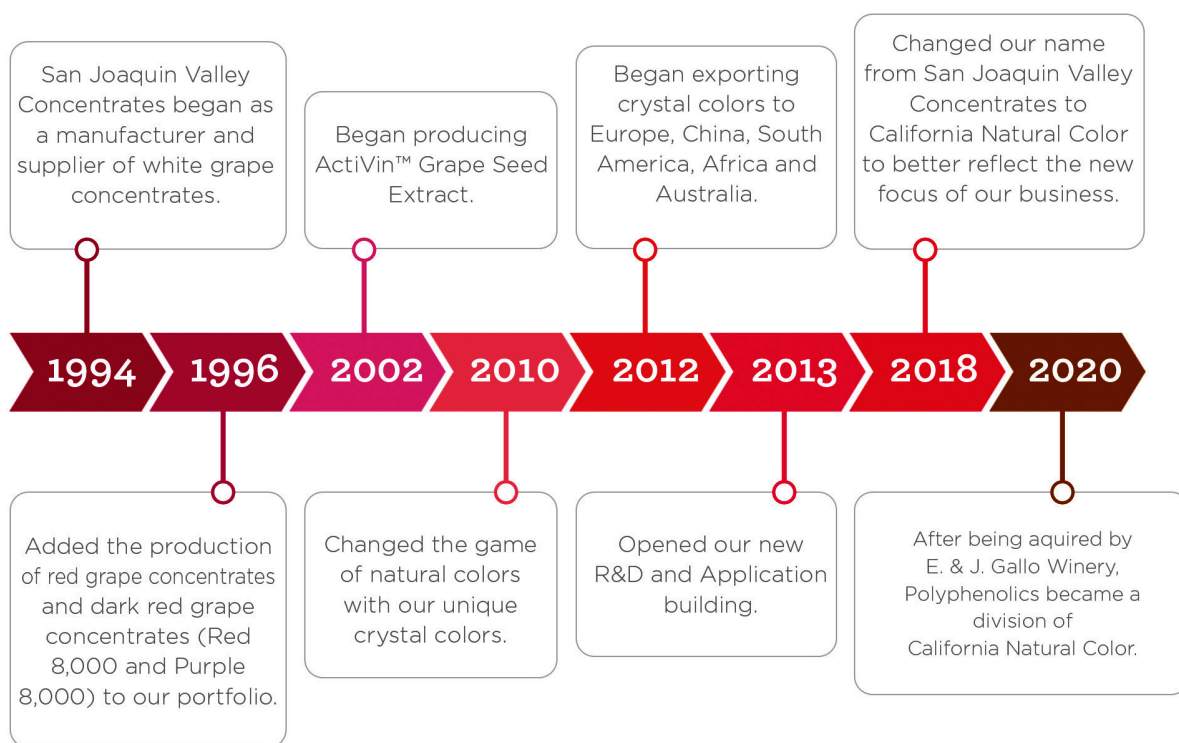
Founded thirty years ago as a supplier of grape juice concentrate, California Natural Color is today a leading global supplier of fruit and vegetable concentrates, natural colors, and grape seed extracts for the food, beverage and nutraceutical industries. It is a division of the world's largest wine-producing company, GALLO.

The company uses a variety of fruits and vegetables in its liquid and crystal colors, including red grapes, black carrots, purple sweet potatoes and other natural sources. As a result of its position

with GALLO, California Natural Color has the largest, most reliable supply of grapes in the world. It is also the world's largest supplier of red anthocyanin colors.

In 2020, GALLO acquired Polyphenolics, a grape seed extract innovator, which became part of the California Natural Color business, creating a phenolics powerhouse.

Today, California Natural Color continues to grow and change the business of creating value from nature-based ingredients.



▶ PLT and Sustainability

Healthier, happier lives today... and tomorrow

At PLT Health Solutions, awareness of the need for equitable, sustainable business practices has grown out of a 70-year concern with human health and well-being—delivered via the plant-based and botanical solutions that it brings to the market. Sustainable practice comes naturally to the company, which realizes it is necessary for success. As a company, they embrace the UN-backed Agenda for 2030 and its Sustainable Development Goals.

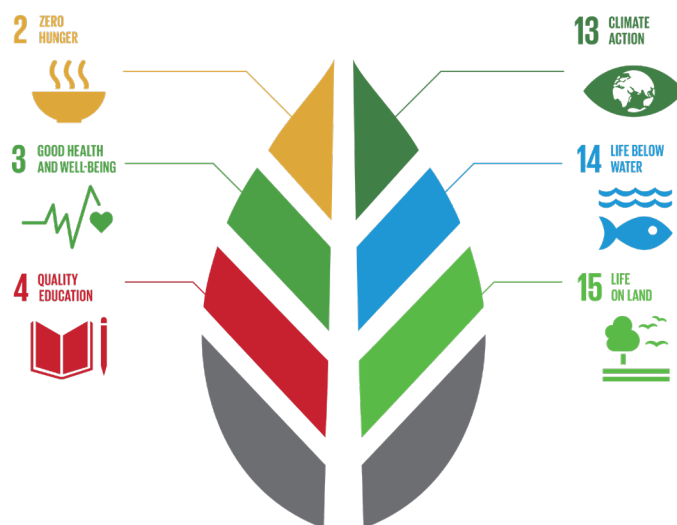
Around the world, PLT engages in efforts to support the sustainable growing, harvesting, and processing of the raw materials that go into its ingredients as part of its PLT360™ initiative. This work includes supply chain reviews of ethical practices and environmental protection activities.

2030 PEOPLE+PLANET™ IMPACT



This initiative supports and is guided by the 2030 Agenda for Sustainable Development adopted by all United Nations member states in 2015. It looks to the 17 Sustainable Development Goals (SDGs) as a framework to guide its activities in sustainability. PLT's specific People+Planet™ programs occur in areas where they feel they can make a significant impact or have particular expertise. The company has set specific goals for its work in these areas to maximize impact.

This initiative supports and is guided by the 2030 Agenda for Sustainable Development adopted by all United Nations member states in 2015



People

Beyond day-to-day business activities, PLT supports groups dedicated to UN Zero Hunger and Good Health and Well-Being SDGs. To achieve impact goals, they also engage with Literacy and Math programs supporting the Quality of Education SDG. The company encourages and supports colleagues as they volunteer, contribute and advocate on behalf of these efforts.

Planet

The PLT People+Planet™ Initiative also looks to positively impact the environment and is focused on Climate Change, Life Under Water, and Life on Land SDGs. PLT is a proud supporter of multiple organizations that promote wellness for the planet.

In 2023, PLT Health Solutions was once again certified carbon neutral by Climeco, LLC, achieving a CarbonFree® partner designation. Climeco is leading the fight against climate change on a mission toward a zero-carbon world. Climeco achieves its goals through climate change education, carbon offsets, reductions, and public outreach. It supports third-party validated and verified renewable energy, energy efficiency, and global reforestation projects that reduce carbon dioxide emissions and the threat of climate change.

Working Together Towards the Future: Sustainability Makes it Happen

Today, PLT is working with customers and innovation partners to support sustainability initiatives. They consider this collaboration a force multiplier for these efforts.

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About Botanical Liaisons

Trish Flaster, Executive Director of Botanical Liaisons, LLC, is a professionally trained ethnobotanist who has worked in the natural products industry for more than 45 years. She has been a pioneer in implementing botanical standards and integrating botanical and cultural knowledge into the development of effective and safe natural products for dietary and medical needs. Botanical Liaisons is a global botanical research consultancy providing clients with a clear path to sustainable and responsible sourcing of authentic botanical materials, while supporting indigenous communities and biological and cultural diversity. Botanical Liaisons provides on-the-ground research and development on six continents, and provides authenticated botanical references for researchers, government agencies, and manufacturers.

* THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION.
THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.

Contact PLT Health Solutions for samples and more information.

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California
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GROWTH THROUGH INNOVATION