

SativaCare Preservative

Leucidal Liquid PT is another of **Active Micro Technologies** antimicrobials developed for the formulator looking to move away from synthetic preservatives containing parabens, formaldehyde donors and phenoxyethanol. To this end, they have developed a full line of products derived from naturally occurring compounds that provide broad spectrum antimicrobial protection. As a result, these novel natural antimicrobials are considered self-preserving cosmetic actives and therefore can be used as consumer-friendly alternatives to synthetic preservatives in a wide range of cosmetic applications.

Leucidal Liquid PT is a probiotic-based ingredient created by the fermentation of *Lactobacillus* in a defined growth medium and at specific conditions. *Lactobacillus* is one of the species of microorganisms used to produce fermented products such as sauerkraut and kimchi, a Korean dietary staple from cabbage. During the fermentation process, in the presence of both standard growth media components and undecylenic acid derived from castor beans, the pH and oxygen levels for *Lactobacillus* are pushed to their limits to induce the production of secondary metabolites as a response to stress. These synergistically active compounds are capable of providing conditioning benefits. An additional growth characteristic of the lactic acid bacteria family is the production of novel antimicrobial peptides. In their natural environment, these antimicrobial peptides provide a competitive advantage to the lactic acid bacteria against other potentially competitive organisms.

After fermentation, lysozyme is added to the culture to facilitate a controlled cell [lysis](#). This step helps ensure the release of the antimicrobial peptides for maximized activity.

Benefits

The ability of **Leucidal Liquid PT** to act as a broad-spectrum antimicrobial is enhanced by the presence of water-soluble undecylenates generated by the *Lactobacillus* during the fermentation process. Undecylenic acid is an oil-soluble, unsaturated fatty acid typically produced by thermal conversion of ricinoleic acid derived from castor oil. Castor oil is a 100% vegetable, biodegradable, natural and renewable resource. In nature, trace quantities of undecylenic acid are also found in human tears and hair.

Biotransformation of undecylenic acid by *Lactobacillus* allows for the generation of water-soluble undecylenates. This process permits the inclusion of this well-known anti-fungal agent without the need for undesirable synthetic solvents. In addition to its antimicrobial properties, this odd-carbon number unsaturated fatty acid is a very effective skin moisturizer.

Leucidal Liquid PT is GMO Free and no ethoxylation, irradiation, sulphonation, hydrogenation, or ethylene oxide is used in processing. The solvent used for extraction is simply water. There are no additional preservatives or antioxidants.