Leading Edge Innovations Awarded U.S. Patent for Utilization of Sub-Micron Oil Particles in Personal Care Product Formulations

Leading Edge Innovations (LEI), a developer of innovative health and beauty products, announced it has received a United States patent for aqueous-based compositions containing sub-micron oil particles and high water miscible solvents.

(PRWEB) September 09, 2016 -- U.S. Patent # 9,357,770, “Substantially Surfactant-Free, Submicron Dispersions of Hydrophobic Agents Containing High Levels of Water Miscible Solvent” is projected to have far reaching implications for creating elegant aesthetics with greatly enhanced performance properties. It enables the formation of products that cannot be made with conventional approaches. It utilizes LEI’s MicroSperse® Technology process to create sub-micron dispersions described in the patent. It covers a wide range of products with unique and desirable qualities, particularly cosmetics, skin care, sun care, OTC drug, and other topical applications.

“We are extremely pleased that the use of our core MicroSperse® Technology in combination with high water miscible solvents has been recognized by the USPTO and look forward to meeting longstanding challenges in the formulation of personal care products, as well as in other important applications,” commented Jim Wilmott, Founder and Chief Scientific Officer of LEI. “This technology represents a way forward in addressing the obstacles previously encountered when attempting to incorporate functional actives that are not water soluble into a consumer-desirable product composition in a safe and effective manner.”

MicroSperse® Technology Enables Development of Multi-Sensory Product Formulations

MicroSperse® Technology is the proprietary technology of LEI that enables the production of sub-micron particles, which eliminates the need for traditional surface-active agents that can be harmful to the skin’s fragile natural moisture barrier. The particle size reduction is dramatic: from 1/10th to 1/20th of the size compared to those produced by conventional emulsification techniques but it is not “nano-technology”. It represents a unique alternative to traditional surfactant-based methods of making oil-in-water emulsions. The MicroSperse® Technology process generates submicron oil particles of oil and other hydrophobic materials that can be combined in virtually any ratios to permit unique compositions which could not be achieved previously by other means.

The MicroSperse® Technology process also aligns well with the multi-sensory product trend, enabling the formulation of a variety of product types that tap into multiple senses, such as cooling sunscreens, moisturizing hand sanitizers, efficacious acne treatments, and soothing cosmetics. Co-inventor Michael Ross, LEI Vice President of Research and Development and Manufacturing, added, “This dynamic technology is ground breaking because it allows for the development of products that cannot be made by traditional emulsification methods, and it also enables our clients to introduce truly unique products to the marketplace.”

LEI Patent Directly Addresses Proposed FDA Ruling for Antiseptic Rubs

The LEI patent award is a well-timed occurrence, as the FDA is in the process of reviewing rules on antiseptic rubs (including hand sanitizers) to address potential safety issues. In June 2016, the regulatory organization began focusing its attention on the impact of certain ingredients contained in antiseptic rubs and their effects on children and pregnant women in particular. Currently, 90% of antiseptic rubs use ethyl alcohol as their active ingredient. It is commonly known that use of high concentrations of ethyl alcohol can disrupt the lipid barrier causing the skin to dry out and creating redness, irritation, rashes, stinging and other complications with
frequent use. The FDA is seeking input from companies on the long-term effects of the ingredient, and will then issue a final determination and ruleset.

LEI’s sub-micron particle formulations directly address all of the FDA concerns related to hand sanitizers. It incorporates essential fatty acids and barrier lipids into a dispersion that is readily stable in a high alcohol environment. As the alcohol either permeates into or evaporates from the skin, the lipids are delivered to the barrier ultimately reinforcing it. The health of the skin improves progressively with frequent repeated use. Recently, LEI has taken proactive steps to introduce its technology to a number of marketers of hand and skin cleansers. Reformulating through LEI’s MicroSperse® Technology represents a minimal cost increase to product development, with the end result being a dramatically improved, safer, and more restorative delivery system. Wilmott commented, “To date, the feedback from brand managers has been overwhelmingly positive, as they have acknowledged that the process maintains the efficacy of their products while offering enhanced skin protection.” This represents a potential win-win for both the brand and the consumer.

Wilmott concluded, “From the beginning, LEI has long been defined by its ability to bring the best science forward to meet the ever-evolving and increasingly complex needs of the personal care market. I’m very proud of our entire team for their efforts so far, as the work we are doing will not only lead to new, innovative product development, but also to formulations that represent safer, and more effective options for consumers worldwide.”

###

About LEI

Founded in 2008, NJ-based Leading Edge Innovations (LEI) develops customized, trend-based products for leading brands in the personal care, hair care cosmetics, and sun care markets, using its proprietary MicroSperse® Technology platform. The MicroSperse® Technology process results in outstanding products that deliver aesthetic excellence and eliminate the need for traditional surface-active agents that often disrupt the skin’s fragile barrier properties. This creates a perfect vehicle for a wide range of innovative and high-performance formulas. From product concept to delivery of finished goods, LEI helps brands meet the needs of an ever-changing cosmetic, personal care and OTC market. For more information on LEI’s wide range of innovative and high-performance formulations, please visit: [www.le-innovations.com](http://www.le-innovations.com).

For more press information, please contact:

Ed Delia, President
Delia Associates
T: 908.534.9044
E: edelia(at)delianet(dot)com
Contact Information
Ed Delia
Delia Associates
+1 908-534-9044

Online Web 2.0 Version
You can read the online version of this press release here.