



WHOLESALE BULK INGREDIENTS



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OZONATED OILS

Ozonated oils are powerful therapeutic and anti-aging compounds obtained by bubbling a blend of ozone (O₃) and pure medical oxygen for extended periods of time in certain vegetable oils. Through this process, a molecule of ozone is stabilized as an ozonide between the double carbon bonds of unsaturated fatty acids, such as the ones present in certain vegetable oils. The resulting ozonated oils keep many of the benefits of ozone gas: germicidal, regenerative, anti-oxidant and oxygenating.

Ozonated oils have been recognized as powerful allies in dermatological treatments, such as the healing of chronic wounds, ischemic ulcers, bed sores and treatment and prevention of diabetic skin issues, to name a few. Our ozonated oils can also be utilized to manufacture food supplements. The quality and of an ozonated oil is determined by laboratory tests (peroxide index, acidity index and aldehyde index), all of which we perform in house.

At OZOLABS, we have invested in the most advanced technology and related laboratory equipment, which allow us to produce a very high quality ozonated oil with the peroxide index and organoleptic characteristics our clients seek. In addition, our team boasts over 40 years of experience in ozonated oils, and our Scientific Advisor, Dr. Silvia Menéndez, PhD, owns two patents and has published over three hundred articles and two books on ozone therapies and ozonated oils.

- ▶ [PubMed Ozonated Oils Research.](#)
- ▶ [Ozonated Oils and Cutaneous Wound Healing.](#)
- ▶ [Ozonated Oils as Antimicrobial Systems in Topical Applications. Their Characterization, Current Applications, and Advances in Improved Delivery Techniques.](#)
- ▶ [Ozone and ozonated oils in skin diseases: a review.](#)
- ▶ [High Efficacy of Ozonated Oils on the Removal of Biofilms Produced by Methicillin-Resistant Staphylococcus aureus \(MRSA\) from Infected Diabetic Foot Ulcers.](#)
- ▶ [Therapeutic Effects of Topical Application of Ozone on Acute Cutaneous Wound Healing.](#)



SEMPEROIL®



Semperoil® is the result of a proprietary R&D effort by OZOLABS, which synergistically blends our certified organic ozonated oils with medicinal plants extracts. Utilizing a process developed in house, we are able to extract the liposoluble active compounds of medicinal plants into our ozonated oils without adding any synthetic additive. This new ingredient can be utilized in dermatological and cosmetic products, as well as in food supplements.

Semperoil® is protected worldwide as a trade secret under international trade law.

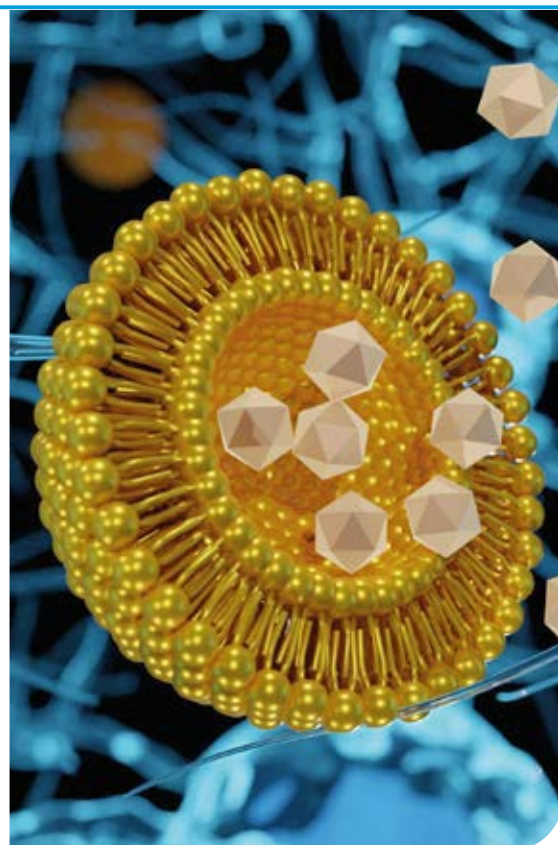
LIPOSOMES / ENCAPSULATIONS

Liposomes are encapsulations of aqueous volumes (active ingredients or medications) within bilayered phospholipid vesicles. Because the liposome's bilayers are made of phospholipids, which are also present in our cells' membrane, absorption of the active principles inside the vesicle is very effective. Upon contact with the cells, the bilayer fuses with other bilayers, such as the cell's membrane, and the contents of the liposomes are absorbed by diffusion. Thus, the active principle contained in the vesicle (liposome) is delivered in a slow and constant manner.

While OZOLABS manufactures liposomal food supplements, a liposome cannot be manufactured with ozonated oils as the active principle because it is impossible for two lipids to create a liposome. Therefore, a better term to describe a "liposome" of ozonated oil would be an encapsulation, where the vesicle is actually not a lipid, but of aqueous origin.

OZOLABS utilizes certified organic ingredients for their liposomes and encapsulations, and we never use Polyethylene glycol in our flavorings.

- ▶ [Application of liposomes in medicine and drug delivery.](#)
- ▶ [Topical Liposomal Ozonated Oil in Complicated Corneal Disease: A Report on Three Clinical Cases.](#)
- ▶ [Antimycotic Activity of Ozonized Oil in Liposome Eye Drops against *Candida* spp.](#)



CERTIFIED ORGANIC HYDROLATS/HYDROSOLS



OZOLABS manufactures and uses hydrolats in many of our formulations and can provide our corporate clients with hydrolats of different plants. Hydrolats are distilled plant waters that contain natural chemical components of different plants.

Hydrolats (also called hydrosols, or water solutions) boast numerous benefits in skin care and they can be utilized in dermatological formulations, compresses, in foot baths, hair care, perfums and specific skin care preparations for children and the elderly.

Hydrolats have a pH between 4 and 6, which makes them particularly suitable for use in skin care. All OZOLABS ingredients are certified organic, vegan, and certified ISO9001.

- ▶ [The Essential Oil and Hydrolats from *Myristica fragrans* Seeds with Magnesium Aluminometasilicate as Excipient: Antioxidant, Antibacterial, and Anti-inflammatory Activity](#)
- ▶ [Chemical and Biochemical Characterization of Essential Oils and Their Corresponding Hydrolats from Six Species of the Lamiaceae Family](#)

NANOEMULSIONS

Nanoemulsions are formed by two immiscible phases (oil on water or water on oil) rendered stable with a surfactant and sometimes a co-emulsifier. Hence, nanoemulsions include an aqueous phase, a lipidic phase and a tensioactive (surfactant) that prevents the two phases from separating.

Emulsions are classified by their droplet size and stability. Nanoemulsions have a droplet size between 100 and 1000nm (nanometers) and are stable thanks to the emulsifier. OZOLABS works exclusively with food-grade emulsifiers and co-emulsifiers to guarantee the highest safety of our products.

Nanoemulsions present several benefits for dermatological and food supplement use. The small nature of their droplets allows it to enter cells, which are comparatively larger than the largest nano droplet, facilitates the delivery of active substances and its absorption by the skin or the gut.

The applications of nanoemulsions are varied and have been widely used in dermatology and pharmaceuticals as versatile carriers of varied substances. The ozonated oils/other nanoemulsions manufactured by OZOLABS are third party analyzed for distribution and droplet size and can be used in food supplements, pharmaceutical products and dermatological formulations. As all our products, they are manufactured under the ISO9001 quality standard, with all our ingredients being non-synthetic.

- ▶ [Microemulsions as novel drug carriers: the formation, stability, applications and toxicity](#)
- ▶ [Application of microemulsions in dermal and transdermal drug delivery](#)
- ▶ [Essential oils prepared in the form of nanoemulsion for the formulation of cosmetic products](#)
- ▶ [Nanoemulsions for food fortification](#)
- ▶ [Nanoemulsions and their applications in cosmetics](#)



QUALITY STANDARDS

- OZOLABS' ozonated oils are manufactured using the highest-grade medical oxygen available in the market. This avoids the creation of nitric acid, a known carcinogenic, produced when ozone reacts with lower quality oxygen.
- Our oils are certified by ISO9001 for the quality of our production processes and they are also certified organic and vegan by Bio.Inspecta/ BioVidaSana. OZOLABS' oil is the only ozonated oil in the world certified organic. Our products are also Leaping Bunny certified as we do not test on animals.
- OZOLABS' team has a collective 49 years of experience in ozonated oils, including patent and trade secret development and clinical and pre-clinical research.
- Every laboratory instrument utilized in the ozonation and production processes are certified food grade and ozone resistant.
- All OZOLABS' products are free of heavy metals.
- All our ozonated oils are tested for aldehyde, acidity, and peroxide index. We can ozonate vegetable oils to any Peroxide Index.