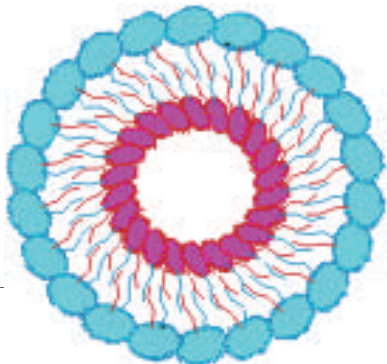


# Nano-cosmeceuticals

How we think, what we do, and how we do it are all demonstrated in our line of retail cosmeceuticals, sold online directly to consumers at [new-equilibrium-skincare.com](http://new-equilibrium-skincare.com). Our nano-cosmeceuticals are rich in vitamins and botanicals and feature our advanced nanotechnologies. Our retail product categories include:

- **anti-aging** treatments designed to provide skin with balanced nutrients and an environment suitable for young, healthy skin.
- **facial skin** treatments safely supporting the special needs of delicate skin around eyes and mouths
- **scalp and hair** treatments to support healthy appearance by clearing irritations and delivering nutrients
- **therapeutics** for skin that is extremely sensitive or damaged due to diabetes, cancer treatment, or other causes of extreme stress
- **dermaceuticals** to improve the appearance of skin affected by acne, blackheads, eczema, psoriasis, dandruff, and irregular coloration



Where Nature, Science, and Art  
Combine.

## For More Information

about nanotechnology and anti-aging effects in skincare:

- [www.elsomresearch.com/learning/](http://www.elsomresearch.com/learning/)
- [www.topical-formulations.com/topical/](http://www.topical-formulations.com/topical/)
- [www.skincare-cosmeceuticals.com/formulations/](http://www.skincare-cosmeceuticals.com/formulations/)

about Elsom Research retail cosmeceuticals:

- [www.new-equilibrium-skincare.com/](http://www.new-equilibrium-skincare.com/)

about Elsom Research:

- [www.elsomresearch.com/](http://www.elsomresearch.com/)
- [www.nanosomin.com/news/](http://www.nanosomin.com/news/)

## Please Contact Us

[www.elsomresearch.com](http://www.elsomresearch.com)

### Elsom Research Co., Inc.

4510 Black Hickory Woods  
San Antonio TX USA 78249-1402

# Elsom Research Nano-Topicals



featuring

## Our Products

- Nano-Cosmeceuticals
- Nano-SkinCare

## Our Technologies

- Nano-Encapsulation
- Dermal-Penetrating Nano-Vehicles
- Nanosomes
- Nano-Double Emulsions

## Our Services

- Bulk Custom Batch Nano-Formulations
- Bulk Private Label Formulations

## Elsom Research

- Pioneers of Nano-Cosmeceuticals
- Leaders in Nano-Technologies-Enhanced Skincare



## Our Philosophy (who we are, how we think)

**Elsom Research** are pioneers in nano-cosmeceuticals and current leaders in developing skincare enhanced by nanotechnology.

Coining the term “Nanosomes™” in the early 1990s, Elsom Research marked the beginning of a new era of nano-tech active skincare in

which focus was shifted toward functional issues such as efficacy, skin permeation, and ingredients selection and away from traditional surface-only expectations. Through our efforts to educate our consumers and suppliers, we have always encouraged interest in natural ingredients and preservation of the planet, and we have demonstrated the practicality of reducing pretty-but-wasteful packaging and avoiding the use of mineral oil in skincare.

We have been at the forefront of manufacturers who interact with and respond to highly-informed and knowledgeable consumers whose impact on their peers, magnified by the Internet, created a new demand for flexibility in formulations. We understand that skincare consumers are responsible for their own health, comfort, and beauty, and we support consumer efforts to participate in making decisions about what will or will not be in the products that they purchase.

## Our Services (what we do)

- **custom batch formulation** (2Kg minimum)
- **solving formulation problems**
- **solubilization** or **dispersion** of non-soluble ingredients
- **encapsulation** of ingredients to prolong shelf life or modulate color or odor
- **loading** of active ingredients into nano-vehicles
- **enhancement** of ingredient penetration into skin
- **private label**

## Our Technologies (how we do it)

**Nano-emulsion** penetrates quickly and deeply, does not clog pores and often helps to clear already-clogged pores (nano-emulsion particles are many times smaller than the pores). Nano-emulsion does not leave a greasy or flaky residue on the skin. Curvature definitions of Nano-emulsion surface components can effect emulsion potency and interaction characteristics with skin. Our Nano-emulsion particles are composed as nano-scale spherical enclaves which we term **Dispersicles™**. Nano-emulsion creates a large surface-to-volume ratio for emulsion particles that contact skin, so more active ingredients contact the skin at the surface-to-surface interaction between the emulsion and the skin. These can also reduce the undesired effects of many ingredients which are considered irritants. When ingredients are mixed into a solution and don't have adequate separation between the molecules, they can accumulate in micro-clusters. In nanometer-range Dispersicles™ this will not happen and the skin will be covered evenly with the active ingredient, reducing its cluster-enhanced irritability.

**Nano-encapsulation** empowers active ingredients beyond their usual scope of activity. It increases ingredients' activity range and their useful shelf life. It reduces the undesirable odors and colors which, unfortunately, many natural active ingredients are burdened with. It simultaneously protects active ingredients from rapid degradation and protects the skin from prolonged exposure to actives. This allows the use of high content of beneficial ingredients such as vitamins with enhanced activity, but without the usual problem of strong odors and colors associated with vitamins; it also eliminates the need to reduce desired concentration of vitamins which make them useful in the first place. Many common cosmeceuticals include very low concentrations of such ingredients, just so that the manufacturer can claim that a beneficial ingredient is present in the formula. We can add beneficial ingredients in high concentrations (as needed) which make them really beneficial. This type of encapsulation can engulf individual active molecules and segregate them from each other, increasing their potency. This type of encapsulation makes captive ingredients less likely to evaporate and thus less aromatic, reducing the unpleasant odor usually associated with vitamin-rich material. This type of encapsulation can also restrict or quench the color appearance of beneficial ingredient, so a strongly-colored beneficial ingredient need not dictate the color of the finished product in which it is included. Molecular individualization (separation

between molecules in a dispersion) is very important for creating even distribution of the ingredients at the micro-scale level. This means that even if a molecule is well mixed in a dispersion so that its tested concentration registers as even, it still can exist in a dispersion as micro-clusters, exposing tiny skin areas to overdose amounts of the ingredient (and causing micro-redness and micro-irritation) while other tiny skin areas don't get any exposure to the ingredient at all. This is less likely to happen when ingredients are separated from each other at the nano-scale.

**Nanosomes™** (nano-liposomes) are our very small liposomes made of very high purity phosphatidylcholine. They are exceptional vehicles for delivery of a variety of beneficial ingredients deep into the skin and removal of debris and waste metabolites from the skin. Nanosomes™ are also very powerful anti-aging liposomes. Nanosomes™ can act as both encapsulation and delivery systems. Our Nanosome™-derived technologies revitalize the field of liposome technology with new and exciting applications, particularly in the pioneering of anti-aging research. Nanosomes™ carry away aged material from cell membranes and supply new material, characteristic of young cells, in its place.

**Multiple emulsions** are combinations of Nano-somes™, Dispersicles™ and Nano-encapsulated ingredients in one formula. We have several products which are formulated with our double-emulsion technology. Our Multiple emulsions absorb very quickly into skin and do not leave any greasy layers on the skin. These features are unmatched, particularly when our products have a substantial oil component. This makes it possible to deliver the benefits of natural oils and oil-soluble actives to the skin without the problem of coating the skin with an oily layer. Our products are suitable for dry and oily skin because they exchange (give and take) materials with the skin at the same time ad-equilibrium. Nano-dispersisomes™ are hybrid formations composed of fused Nanosomes™ and Nano-emulsion; they may also contain Nano-encapsulates.

**Whole extraction** is a non-fractionating extraction technology. It allows us to incorporate botanicals into our formulations without disrupting the delicate natural balance of their internal components.

