

**technology
platforms**



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Active Concepts launches the next evolution of tomorrow's technology to the Cosmetic Industry.

These platforms illustrate our core competencies and how they can improve your product chemistry and enhance your marketing potential.

You are invited to investigate how these technologies can work for you today.

Detailed information on our individual products may be found on our Technical Data Sheets.



BioFermentation

Traditional Art -- **Modern Science**

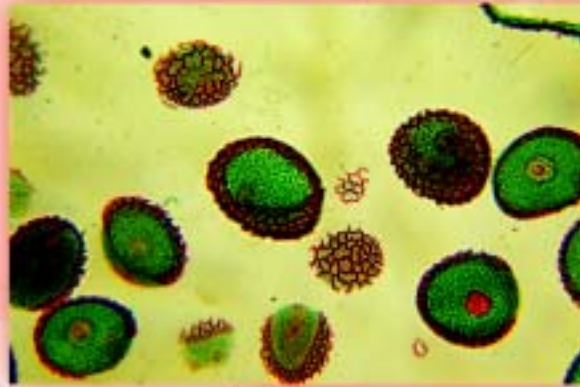
Fermentation is one of the oldest technologies used by different peoples and cultures throughout the world for food preservation. Products such as cheese, bread, and wine have been produced for thousands of years by various fermentation techniques. Fermented foods are produced throughout the entire world and make significant dietary contributions to many cultures.

Most fermentation is carried out via lactic acid bacteria (LAB) also known as lactobacilli. Fermentation acts as a preservation for foods, enables foods to be more readily digested, as well as increases the production of vitamins, minerals, and various other phytochemicals, depending upon the plant being fermented. Often the fermentation process increases the bioavailability of many chemical compounds by freeing them from the food matrix to which they are typically bound.

The most well known fermented foods are cheese and yogurt, both of which are derived from milk. Natto, a fermented soybean product, is a staple

in Japan and is rich in the anti-cancer isoflavone genistein. Natto is said to contain up to five times more genistein than that of tofu or soy milk. Fermented cabbage, typically known to the Western World as "sauerkraut" was originally developed in China several thousand years ago and is still

a popular dish in Germany and North America. There are an abundance of other fermented food types in existence as well.



Utilizing these fermentation

techniques, we have developed a line of BioFerment products for the Cosmetic Industry based on the principle that fermentation allows for the isolation and concentration of various phytochemicals.

We have carefully reviewed specific properties of each plant material and have focused on developing BioFerments based upon the native constituents or pre-cursor chemicals found within each particular plant.

Each product developed has its own unique characteristics and activities.



Extraction Technology

Extraction is a broad term that can encompass anything from making a simple cup of tea, to the extensive use of membrane filtration performed by pharmaceutical companies to isolate various active components.

At **Active Concepts** we utilize a variety of Extraction Technologies, from simple-to-sophisticated. While this allows us to produce a variety of products, it also grants us the ability to develop materials that meet specific customer demands, ranging from simple hydroglycolic extracts to more precise extractions with specific phytochemical contents.



Protein Chemistry

Proteins are the building blocks of nature. They serve as the structural scaffolding in our cells, blood, muscle, skin, brain, and even tooth enamel. The smallest cellular organisms contain proteins, such as bacteria and even viruses.

Proteins are huge polymeric molecules that vary greatly in molecular weight and dimensions. All proteins are constructed from small monomeric units known as amino acids.

Just as proteins are the building blocks of nature, they are also basic ingredients important to many cosmetic formulations. Many skin care and hair care formulations are built

around the utilization of proteins. Proteins within cosmetic formulations are valued for their strong moisturizing and film forming properties. They are often used in formulations to condition the hair, while offering protection and moisture binding.

Many proteins that have been used throughout the years in the Cosmetic Industry were derived from animal sources. Today, this is no longer the case, as there has been a tremendous movement towards a greener, more environmentally friendly practice.

Active Concepts offers a wide range of non-animal derived proteins for use in the Cosmetic Industry.



Functional Materials

Cosmetic raw material ingredients can be divided into two categories — Active Ingredients and Functional Materials. Functional Materials consist of such items as rheological agents, emulsifiers, and aesthetic modifiers. Just as proteins are the building blocks of nature, Functional Materials are the building blocks of all cosmetic formulations.



Delivery Systems

Making active ingredients work longer and more effectively is a continuing field of research within the Pharmaceutical Industry as well as in the arena of Dermatological Science. For cosmetic purposes, Delivery Systems can be defined as the means by which active components can be carried to the surface of the skin or to the hair. These systems can be vesicles or polymeric in nature. Delivery Systems can be used to make performance cosmetics more effective.



BioActives

BioActives can be defined as having an effect upon living tissues. **Active Concepts** provides BioActives that can be considered “claim-oriented materials” which are designed to elicit specific effects from skin or hair.

BioActives tend to play a key role in the development of claims by finished goods houses and thus play a key role in marketing to the final consumer.

Active Concepts' BioActives represent discrete molecular entities, designed to elicit a specific effect. We utilize a variety of technologies to approach this field, ranging from yeast fermentation, biotransformation, and/or chemical modification to bring highly active compounds to the Cosmetic Industry.

Tomorrow's Vision --- Today!

We are developing new and exciting products for you right now.

Investigate how these platforms can improve your product chemistry and enhance your marketing potential.



technology platforms

BioFermentation

Extraction Technology

Protein Chemistry

Functional Materials

Delivery Systems

BioActives

Additional information and product samples are available.



Tomorrow's vision ... *Today!*

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