

## Chapter: Herbal Science

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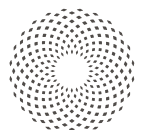
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## What is herbal science?



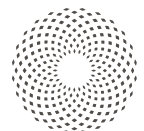
### **Herbal Science is the bridge between traditional plant medicine and modern science.**

In the same way that we use plants as food to nourish us, we can also use plants as medicine to heal our bodies. For as long as we have existed, people have used plants as medicine. These cures and recipes have been passed down through the centuries. In fact, the first recorded evidence of a medicinal plant recipe was found on a Sumerian clay slab, approximately 5,000 years old. (1)

Plants produce various substances that can alter or have a therapeutic effect on the body, such as bitters that aid digestion, flavonoids that are antioxidant in nature and neutralize free radicals, and coumarins that thin the blood. A body of knowledge has been built up around the benefits of plants for millennia, dating back to 77 A.D. when the Greek physician Dioscorides wrote his famous *De Materia Medica* herbal pharmacopeia (similar to an encyclopedia of plants and their healing properties). (2)

In the early 19th century, a major development in the world of science changed the path of plant medicine. In 1806, scientists discovered the pharmaceutical practice of isolating active ingredients from their plant sources to create more potent synthetic versions. A well-known example is the salicylates extracted from willow bark that are now industrially produced at large scale for aspirin. These man-made pharmaceutical drugs were believed to be superior because they acted faster and could be synthetically reproduced unlike the issues encountered when extracting actives from plant material where enzymes can cause fundamental changes during the drying process.

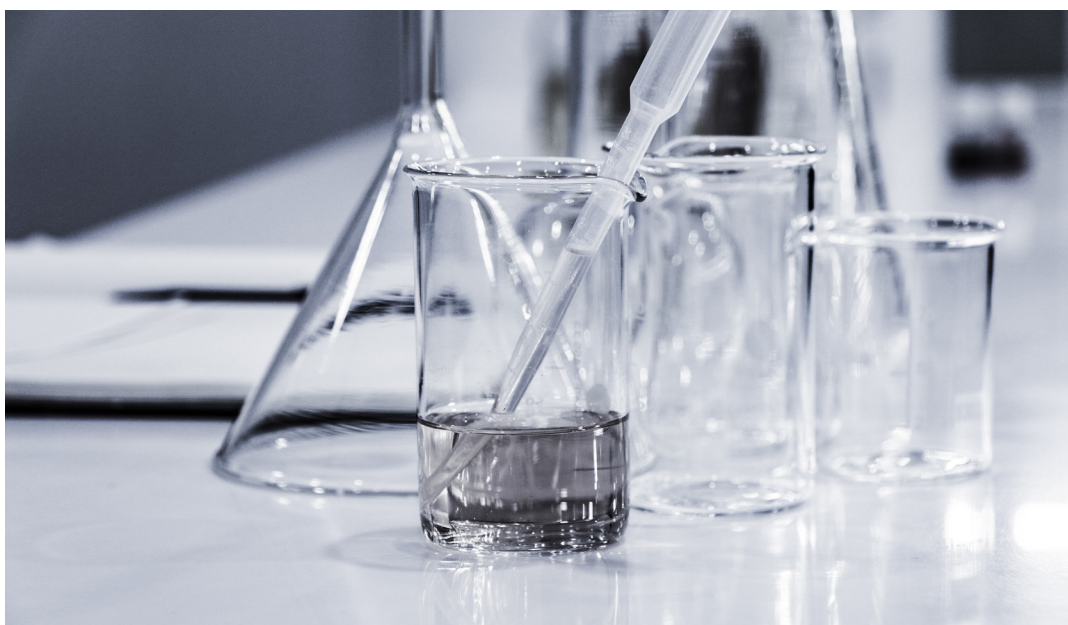
But why do herbalists still practice their craft if modern medicine has isolated the best constituents? Because herbalists believe that the whole plant is sometimes a more balanced and beneficial way to take a medicine. Often times, there are synergies between plant constituents. A classic example is dandelion as a diuretic. Conventional diuretics can reduce potassium levels in the body, which then have to be restored using potassium supplements. Instead, herbalists use dandelion leaves as a powerful diuretic. Dandelion leaves already contain potassium, which naturally replaces what is lost, thereby maintaining balance in the body and avoiding a negative side effect.



## But plants alone can't solve every problem.

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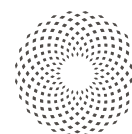
Herbal science takes the best parts from traditional herbal medicine, the hundreds of years of experience and knowledge, and builds on it with modern tools. Advanced analysis techniques, such as mass spectrometry, allow us to make extractions and know exactly what compounds they contain. Complex chemical mixtures can be fully profiled, constituents identified and accurately quantified, and tracked over time to ensure a product's chemical stability. We can also look at what effects these constituents have on the body through conventional scientific laboratory approaches, including cell cultures or clinical trials. How well their components are absorbed and metabolized by the body are also studied and the results contribute to dosage, safety and herb-drug interaction data.



Today, a large body of evidence exists to show that herbal science works and yet there is so much space for discovering more. For every popular ingredient out there in conventional skincare, there is an effective, safe and most likely purer version available from plants. Synthetic silicones can be replaced with plant-derived silicones from coconut, castor bean and sugarcane. Botanical ingredients can deliver profound anti-inflammatory, antioxidant, tissue regenerating, circulation improving and hydrating benefits. When it comes to applying remedies to your skin, there's no better place to look for safe and effective ingredients than the plant world.

1. Kelly K. History of Medicine. New York: Facts on File; 2009. pp. 29–50.
2. Thorwald J. Power and Knowledge of Ancient Physicians. Zagreb: August Cesarec; 1991. pp. 10–255.

Read more about the history of herbal medicine [here](#).



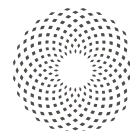
## Natural vs. Organic

### **Why do we use only organic ingredients in our products?**

Organic ingredients are held to the highest standards. Unfortunately, there are no standards or certifying bodies controlling the use of the word “natural,” and so it often means very little. “Organic,” on the other hand, is controlled by certifying bodies that require total transparency and a rigorous process to verify the quality and source of each ingredient.



Similarly, using organic ingredients is better for the environment, as the toxins from pesticides and herbicides used in conventional farming often make their way back into water systems, affecting drinking water and threatening our planet’s delicate ecosystems. For all these reasons and more, we remain committed to organic ingredients.





# Formulation

## Why do we use only organic ingredients in our products?

Our formulation team is made up of experienced formulators. We are herbal scientists, chemists, and dermatologists, as well as experts who have worked in the beauty industry for years. Above all, we are passionate about natural skincare.

When we formulate, we adhere to the Codex Beauty Code:

- **High-performance results:** We use effective native ingredients—and not just in small amounts to look impressive on an ingredient list. Instead, we formulate products with proven skincare benefits.
- **Ultra-pure ingredients:** We use the Environmental Working Group's (EWG) standards as our benchmark and push ourselves to use as pure as possible ingredients.
- **Plant-based preservatives:** We avoid harsh, traditional preservatives in favor of self-preserving botanicals.
- **Verified by science:** Our formulas work—and we show you the proof through clinical trials and lab tests.

**Never stop innovating:** We continually incorporate the latest, cutting-edge advancements in bio-technology and natural ingredient science to solve our customers' needs. And we listen to, and value, honest feedback.

