



# HoneyLex HoneyPlex

## Botanical & Herbal Blends Extracted with Nature's Perfect Gift: HONEY

HoneyLex ingredients are value-added botanical extracts, due to their unique proprietary extraction process which captures the beneficial constituents of the original botanical matter, while adding the many benefits of honey.

HoneyLex and HoneyPlex represent a unique concept in extraction methodology that introduces additional performance and nutrients to quality botanical extracts. Our proprietary line of honey-complexed botanical extracts is available in both Traditional and Certified Organic forms.

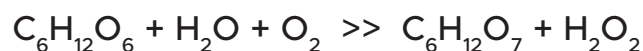
## Why Honey?

Honey has been used for thousands of years in treatments to beautify, protect and heal the body both inside and out. By utilizing honey in the solvent stage of extraction, essentially all common botanicals are imbued with further functionality and increased value.

## Anti-bacterial / Anti-microbial Properties

The antibacterial property of a multi-floral honey is due in part to the osmotic effect of its high-sugar content. Since the cell membrane of a microorganism is permeable, the glucose from honey tends to penetrate it, thus inhibiting growth in common microorganisms, such as *P. acnes*. When honey is used to enhance an extract or blend of extracts, the resulting natural ingredient possesses honey's other

antimicrobial properties, since it contains an enzyme that produces a very low concentration of Peroxide (see equation below). This is low enough (1 mmol/Liter) to inhibit bacterial growth while not damaging the fibroblast cells of human skin. In addition, the glucose content of honey, flavonoids such as caffeic and ferulic acids and the acid pH (typically between pH3 and pH4) may augment further natural antibacterial properties.



## Anti-aging Properties

Free radicals can cause damage and premature aging to cells over time. Both HoneyLex and HoneyPlex extracts possess anti-aging properties, thanks in part to honey's ability to sequester and inactivate the free ions which catalyse the formation of skin cell-damaging, oxygen free radicals. HoneyLex and HoneyPlex contain natural phytochemical antioxidants, as well as organic acids, vitamins and enzymes, which aid in removing the harmful oxygen free radicals, in addition to the numerous benefits attributed to the selected natural botanical extract or botanical blends. The skin's ability to retain moisture is crucial to maintaining youthful softness, suppleness and elasticity.

With age and daily exposure to the environment, the skin loses its ability to retain moisture and may become dry and wrinkled. The honey present in a HoneyLex extract acts as a natural humectant that attracts and retains water molecules. This beneficial hydrating quality is perfect for dry, sensitive or problem skin in bath and body products; and helps to condition dry and damaged hair when added to shampoos, conditioners and other hair care products.

### Wound Healing Properties

The MIC (minimum inhibitory concentration) of honey is found to range from 1.8% to 10.8% (v/v), indicating that honey has sufficient antibacterial potency to stop bacterial growth if diluted at least nine times, and up to 56 times in the presence of *Staphylococcus aureus*, the most common wound pathogen. Studies have demonstrated that honey reduces inflammation (seen histologically) compared with various controls, in deep and superficial burns and in full-thickness wounds.

### The HoneyLex / HoneyPlex Line

HoneyLex extracts are manufactured from high quality botanicals, sourced both domestically and internationally. Specific parts of the plant are utilized in conformity with the PCPC/INCI standards. HoneyLex extracts are safe and effective for external use. They may be added to emulsions, gels, sprays, cosmetics, skin and hair care, bath and body, household and laundry, as well as pet care products.

### HoneyPlex: Blends of Distinction

Simply stated, HoneyPlex extract blends are made from multiple HoneyLex botanical extracts and represent the “natural benefit progression” from single extracts to multi-blends.

They utilize the same proprietary botanical extraction technology to produce either our suggested blends or your own custom blend of up to 6 HoneyLex individual extracts.

We can provide suggested-use blends, which are helpful to address specific formulation needs. For example, a typical HoneyPlex blend for a dry skin lotion formulation might include: Burdock, Echinacea, Calendula, Aloe Vera and Yellow Root extracts. For promoting skin circulation

benefits, a HoneyPlex blend of Cayenne, Ginger, Ginkgo Biloba and Gotu Kola extracts might be the answer.

We can customize HoneyPlex extract blends according to your needs and help address marketing requirements, as well as formulator’s challenges.

\*\*\* **NOT FOR HUMAN CONSUMPTION** \*\*\*

### FEATURES & BENEFITS

- » anti-bacterial properties
- » anti-aging properties
- » humectant properties
- » wound healing properties
- » pleasing light amber color
- » light honey aroma
- » available as certified organic
- » natural ingredient

### PACKAGING

Vege Tech HoneyLex and HoneyPlex are available in the following standard sizes:

- » sample size (2 fl oz)
- » 8 lbs (1 gal)
- » 40 lbs (5 gal pail)
- » 240 lbs (30 gal drum)
- » 400 lbs (55 gal drum)

### SHELF LIFE

12 months @ 18-25°C (64-77°F).  
Protect from freezing and excessive heat.