

HoneyLex™

HoneyPlex™

Honey-Based
Natural Ingredients





HoneyLex™ OR HoneyLex™
Organic

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Botanicals & Herbal Blends Extracted With Nature's Perfect Gift: Honey



Vege Tech Company is proud to announce the HoneyLex™ & HoneyPlex™ line of honey-complexed functional, botanical extract ingredients available in both Traditional and Certified Organic forms. HoneyLex™ extracts are value-added due to their unique proprietary extraction process, which captures the beneficial constituents of the original botanical matter combined with the many benefits of honey.



It is well known that natural honey is a sweet amber liquid produced by the hard work of honeybees derived from the nectar of various flowering plants and trees. Mankind depends on this hard working bee to both pollinate and help propagate the various food crops upon which we all depend. Honey gets its sweetness from the monosaccharides contained in the nectar: fructose and glucose. A lesser known fact is that honey has desirable chemical properties that provide efficacy in personal care products, especially when utilized in the extraction process of natural botanicals.



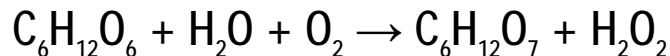
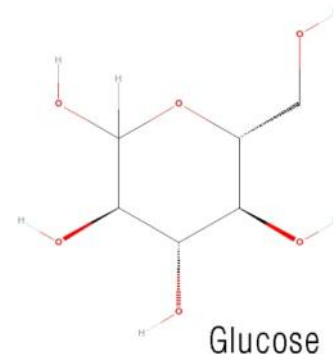
Why Honey?

HoneyLex™ and HoneyPlex™ represent a new concept in extraction methodology to add additional performance, nutrients and fresh synergies to quality botanical extracts. 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, virtually all common botanicals are imbued with added functionality and increased value.

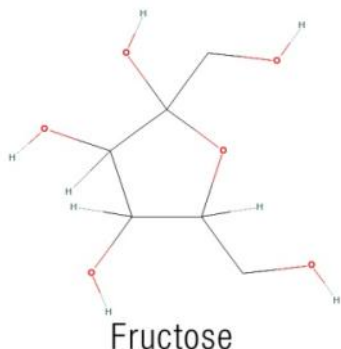
Anti-Bacterial/Anti-Microbial Properties

The anti-bacterial 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 enter into the cell membrane and aids the inhibition of the growth of various microorganisms, such as *P. acnes*.

When honey is complexed with a HoneyLex™ extract, or blend of extracts as in HoneyPlex™, the resulting natural ingredient possesses honey's other anti-microbial properties since it contains an enzyme that produces a very low concentration of Hydrogen 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 lend further natural anti-bacterial properties.



Anti-Aging Properties



Free radicals can cause damage and premature aging to cells over time. Both HoneyLex™ & HoneyPlex™ 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™ & HoneyPlex™ contains natural phytochemical antioxidants including organic acids, vitamins and enzymes such as *chrysin*, *pinobanksin*, *vitamins B's & C*, *catalase*, and *pinocembrin* which aid in removing harmful oxygen free radicals, in addition to the numerous benefits attributed to the selected natural botanical 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 (history reputed honey & milk baths as Cleopatra's beauty secret); and helps to condition dry and damaged hair when added to shampoos, conditioners and hair care or styling 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 the finest quality botanicals, sourced domestically and globally utilizing eco-friendly growers and wildcrafters who embrace our corporate policy of supporting only sustainable farming. Specific parts of the plant are then utilized as per the CTFA/INCI monographs. Prior to conducting the extraction process, close detail is given to the unique constituents inherent to each botanical. Vege Tech's HoneyLex™ extracts contain only the pure, sweet, easy-to-use characteristics formulators desire.

HoneyLex™ extracts are safe and effective for external use. HoneyLex™ extracts may be added to all Emulsions, Gels, Sprays, Cosmetics, Skin & Hair Care, Bath & Body, Household & Laundry as well as Pet Care products. From Aloe to Yerba Santa, HoneyLex™ extracts provide the formulator with variety, quality and flexibility. Hi-value is achieved when you combine those attributes with HoneyLex™ appealing light amber color, sweetness and cost-effective pricing.

HoneyPlex™: Blends of distinction

Simply stated, HoneyPlex™ extract blends are made from HoneyPlex™ botanical extracts, and represent the “Natural Benefit Progression” from single extracts to multi-blends. Naturally, they utilize the same proprietary botanical extraction technology to produce either our suggested-use blends or your own custom blend to meet the most demanding formulation requirements. Blends of double, triple, or even a dozen or more different HoneyLex™ botanical extracts can be customized... making projects a bit easier for both marketing and formulators alike.



Blends can be of benefit by virtue that they are often more cost effective, require fewer MOQ issues and are certainly less labor intensive.

We can provide suggested-use blends, which are helpful to address specific formulation needs. For instance, much of the literature is now touting the importance of blending various botanicals for their combined synergistic effects. 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. You can pick from our list of suggested-use HoneyPlex™ extract blends or get even more creative and pick any combination of HoneyLex™ extracts that help address marketing requirements as well as solve formulator's challenges.

HoneyLex™ Estimated Values per 100 g (3.5 oz)

Protein	0.06 g
Amino Acids	0.01 - 0.02 g
Riboflavin (Vit. B2)	0.0076 mg
Niacin (Vit. B3)	0.0242 mg
Pantothenic acid (B5)	0.034 mg
Vitamin B6	0.0048 mg
Folate (Vit. B9)	0.4 µg
Vitamin C	0.1 mg
Calcium	1.2 mg
Iron	0.084 mg
Magnesium	0.4 mg
Phosphorus	0.8 mg
Potassium	10.4 mg
Sodium	0.8 mg
Zinc	0.044 mg

Whether you choose a single HoneyLex™ extract or a unique HoneyPlex™ blend, our R&D and sourcing team always stands ready to work with you on custom sourcing off-list botanical extracts. Be it plant, seed, flower, fruit, root or bark - if we can find a sustainable and eco-friendly grower or wildcrafter, we will work hard to provide you access to some of the most interesting, rare, and exotic extracts from around the globe.

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

Proposed INCI for HoneyLex™ & HoneyPlex™:

Water (and) Honey (and) *Botanical Latin Name of Herb* (and) Chlorphenesin (and) Benzoic Acid (and) Sorbic Acid (and) Phenoxyethanol

Proposed INCI for HoneyLex™ Organic & HoneyPlex™ Organic:

Water (and) Organic Honey (and) *Organic Botanical Latin Name of Herb* (and) Organic Citrus Medica Limonum Extract

Suggested Use Levels: 0.5% - 10%

pH: 3.0 – 6.0

Packaging:

Vege Tech HoneyLex™ & HoneyPlex™ is 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)
- 2,200 lbs. (275 gal. tote)

Shelf Life: 12 months @ 18 - 25° C (64 - 77° F). Protect from freezing.

