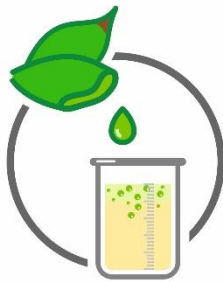


## THE HYDREPAIR® PLANT EXTRACT LABORATORY

As the largest human organ, the skin performs many different functions to protect and regulate. In order for the skin to perform these important tasks, it needs nutrients, trace elements and supporting skin care substances from both inside and outside. Frequent washing and disinfection places additional strain on the skin's protective function. Botanica has developed a purely natural HYDRepair® plant extract system which optimally supports moisturising and regenerating cosmetic formulations. The plants can be individually combined to create your own HYDRepair® plant extract complex.

The individual HYDRepair® complex is created in four simple steps:

### 1. HYDRepair® Basis



The basis and natural extraction agent of the HYDRepair® System is a combination of organic glycerine and Sempervivum organic juice. Due to the glycerine content of 80% no additional preservative is needed. The addition of water is not necessary. The organic value is 100%.

#### **Bio Sempervivum juice: promotes wound healing, cell regenerating**

The Sempervivum plants are cultivated in Switzerland according to controlled organic cultivation. The harvested fresh plants are cut in a short time and gently pressed in the region. The direct juice is filtered and immediately frozen. The short transport routes and regional processing result in a sustainable and valuable natural product.

Houseleek (*Sempervivum tectorum*) contains polyphenols, tannins, proanthocyanidins and a high diversity of flavonoids, which have been shown to have antioxidant, anti-inflammatory and antimicrobial effects [1, 2, 3]. By means of an in vitro scratch assay on human keratinocytes, a wound healing and cell regenerating effect of Bio Sempervivum juice was demonstrated, similar to that of Aloe Vera Bio juice, which was tested for comparison [4].

#### **Bio glycerine: moisturizing**

Glycerine is a natural component of animal and vegetable fats. It is used for various functions in cosmetics, mainly as a moisturizer [5].





## 2. Selection of plants



There are no limits to creativity. You can choose your favourites from the huge Botanica selection of flowers, fruits, roots, seeds and leaves. We would be happy to advise you on your decision or make individual suggestions.

## 3. Extraction



The selected plants are extracted by a gentle maceration process at room temperature. The ingredients of the plants are dissolved in the HYDRepair® base, thus releasing all their properties. The result is a valuable plant complex of 100% natural origin.

## 4. Your HYDRepair® Complex



After the external microbiological analysis the HYDRepair® plant complex is ready for use. Due to the natural and water-soluble components, the complex can be easily incorporated into various cosmetic formulations.



## Properties HYDRepair® plant extract complex:

- ✔ Organic and natural cosmetics compliant
- ✔ Vegan
- ✔ 100% natural
- ✔ 100% organic value
- ✔ Coconut- and palm oil free

## Literature

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<http://dx.doi.org/10.1155/2013/162750>.

[4] Botanica Internal Documentation: *Sempervivum* Bio Juice (CH) P-00002997.

[5] Becker, L.C., Bergfeld, W.F., Belsito, D.V., Hill, R.A., Klaassen, C.D., Liebler, D.C., Marks, J.G., Shank, R.C., Slaga, T.J., Snyder, P.W., et al. (2019). Safety Assessment of Glycerin as Used in Cosmetics. *International Journal of Toxicology* 38, 6S-22S

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