

Age spots and dark patches are two very common, persistent, and unsightly skin problems. They result from localized or diffuse hyper-pigmentation of the epidermis. Based on the **CHOLLEY** exclusive **IC-RAMP®** Technology, **CHOLLEY PhytoCell Harmonizer** is a Super Premium product, specifically formulated with the best and the safest ingredients, to effectively fight these problems.

What is hyper-pigmentation?

Hyper-pigmentation occurs when a patch of skin appears darker than its surrounding area. It is due to excess production of melanin and can affect people of all skin colors. It may be localized or diffuse (widespread), but with proper care and treatment it can be made considerably less visible.

Melanin

Melanin is a brown pigment found in the epidermis (the upper - so called horny) layer of the skin. It gives the skin its natural tan color and its function is to protect the organism against harmful UV radiations. Melanin is produced by special cells in the basal layer of the epidermis called melanocytes. Synthesis and maturation of melanin occurs in several steps as follows:

- The production of melanin is triggered by **Melanocyte Stimulating Hormones (α , β , and γ -MSH)**. They bind with specific site on melanocytes to produce the melanin pigment. **α -MSH** is by far the most important hormone in the production of melanin.
- Once produced, melanin has to mature by reacting with the Tyrosinase enzyme. **Tyrosinase** is a copper-containing enzyme that reacts with melanin in a two step process. Without the tyrosinase process, melanin cannot mature and attain its brown color.

Darker skins contain more melanin. Exposure to UV radiations (sunlight or tanning lamps) intensifies and accelerates melanin production.

Hyper-pigmentation due to increased or irregular production of melanin can cause age spots or dark patches. A skin trauma or acne scars can also result in hyper pigmentation.

Age Spots

Age spots are flat blemishes that develop on the skin most exposed to the sun. They are often referred to as liver spots, although they have nothing to do with this internal organ or its functions. Age spots range from pinhead size to more than 1 cm across; and may be tan, brown or black in color. They appear predominantly on face, hands, shoulders and arms. Very often they group together, thus becoming more evident.

Age spots are frequent among people over the age of 50 with a fair complexion, but they are also common among darker-skinned individuals. Younger people can get them too, especially if they spend a lot of time in the sun.

Age spots are generally harmless and do not require medical treatment, but aesthetically they are unpleasant and make the individual appear older and frail. Consulting a physician is prudent if one detects any of the following changes in an age spot:

- A rapid increase in size
- Jagged or irregular borders
- A rough surface or an abnormal color
- Itching, swelling, or bleeding

Ingredients:

AQUA, ETHYLHEXYL PALMITATE, HYDROXYPROPYL STARCH PHOSPHATE, ETHYLHEXYL METHOXYCINNAMATE, PEG-6 STEARATE, ALPHA-ARBUTIN, AZELAMIDE MEA, PROPYLENE GLYCOL, GLYCERIN, BENZYL ALCOHOL, GLYCOL STEARATE, PEG-32 STEARATE, SCLEROTIUM GUM, ACACIA SENEGAL GUM, CUCUMIS SATIVUS FRUIT EXTRACT, GLYCYRRHIZA GLABRA ROOT EXTRACT, SALICYLIC ACID, ISOMALT, NIACINAMIDE, DEHYDROACETIC ACID, PENTAERYTHRITYL TETRA-DI-T-BUTYL HYDROXYHYDROCINNAMATE, LECITHIN, PHENOXYETHANOL, PARFUM, LEPIDIUM SATIVUM SPROUT EXTRACT, CROCUS CHRYSANTHUS BULB EXTRACT, VITIS VINIFERA FLOWER CELL EXTRACT, PHOSPHOLIPIDS, SODIUM BENZOATE.

Packaging:

Available in retail version



CHOLLEY PhytoCell Harmonizer

Ref. 1006V
30 ml

Why stem cells?

Adult stem cells play an important role as a repair system for living organisms. They are responsible for replenishing dying cells and regenerating damaged tissues. Skin stem cells are located in the basal layer of the epidermis, where they constitute 2-7% of the cell population. Skin stem cells have a limited life span and they are affected by environmental stress factors. As the skin ages the number and the efficiency of its stem cells diminish. To slow the aging process stem cells have to be protected and fortified. Fortunately, human stem cells exhibit epigenetic factors similar to those of some special plants. Hence these phyto stem cells can be used to supply vital nutrients (metabolites) to human stem cells and improve their health, strength, and longevity.

Melasma

Melasma or **chloasma** (also known as the mask of pregnancy) is a tan or dark discoloration of skin. It affects mostly women, and especially in conjunction with a pregnancy, use of contraceptive pills, menopause, or a hormone replacement therapy. Melasma is thought to be induced by surges in the female sex hormones (estrogen and progesterone), which trigger overproduction of **Melanocyte Stimulating Hormones (MSH)**.

Melasma usually appears as well defined hyper-pigmented patches on the cheeks, nose, upper lip, or forehead. It develops overtime and becomes more evident with sun exposure. Genetic predisposition is a major factor in the development of melasma, and women with a brown complexion living in a sunny region are particularly susceptible to it. Stress, an allergic reaction to certain medications, and unsafe cosmetic products or treatments can also contribute to the development of melasma.



Age Spots on an elderly hand



Post Pregnancy Melasma

CHOLLEY PhytoCell Harmonizer

Hyper-pigmentation of the skin is a difficult problem and its proper care requires a very high quality product and consistency in use. For this purpose **CHOLLEY PhytoCell Harmonizer** has been developed as a Super Premium product using absolutely the best, the most effective, and the safest ingredients available. Since age spots and dark patches of the skin are the result of localized over production of melanin, **CHOLLEY PhytoCell Harmonizer** utilizes a double-pronged approach by:

1. Obstructing the production of melanin via blocking the attachment of α -MSH to melanocytes
2. Arresting the maturation of melanin and its darkening by impeding the activity of the Tyrosinase hormone.

CHOLLEY PhytoCell Harmonizer achieves its exceptional performance via a number of very special ingredients including: **Alpha Arbutin**, **Lepidium Sativum Sprout Extract**, and stem cell extracts of **Vitis Vinifera** (grape) and **Azelamide MEA**.

- Lepidium Sativum sprout extract blocks the hormonal side of the melanin production cycle. It inhibits the binding of α -MSH on the melanocytes to prevent formation of melanin.
- α -Arbutin is the most effective known inhibitor of tyrosinase process, which is essential for maturation of the melanin.
- Vitis Vinifera Flower Cell Extract increases the tolerance of skin to UV radiation and preserves the regenerative potency of epidermal stem cells.
- Azelamide MEA is an excellent skin whitening ingredient with dermal repair and soothing properties.

The combined effect of these exceptional ingredients amplified with the natural extracts of licorice and cucumber drastically lowers the melanin content of the hyper-pigmented skin for fast and outstanding results. It also protects the skin against photoaging and oxidizing UV stress.

Stem Cells, Skin Regeneration, and IC-RAMP® Technology

Skin cells are in constant communication with one another. For instance, when the skin is cut, cells at all layers (epidermis, dermis, and hypodermis) get involved to prevent infection and heal the damage. Intercellular communication also involves regenerative processes. As an example exfoliation of dead epidermal cells triggers production of new cells at the basal (germinating) layer of the skin.

IC-RAMP® stands for **Inter Cellular, Regenerative, Relay, Resonance, and Amplification**. It takes advantage of the capacity of special phyto stem cells to trigger release of **Connective Tissue Growth Factor (CTGF)** by the keratinocytes of the epidermis. **CTGF** reaches deep into the dermis layer to boost production of new connective tissue by Fibroblast cells. The dermis layer is where the most notable signs of aging - lines and wrinkles – develop as skin matures. **CTGF** binds with special receptors on fibroblasts to set off the production of new collagen, elastin, and hyaluronic acid that constitute the **Extra Cellular Matrix (ECM)** or the fundamental support structure of the skin.

Performance characteristics & active ingredients

CHOLLEY Phytocell Harmonizer performs important dermatological functions as follows:

- **Obstructs production of melanin by blocking activity of the melanocyte stimulating hormones (MSH)**
LEPIDIUM SATIVUM SPROUT EXTRACT
- **Very intense skin whitening action by obstructing the tyrosinase enzyme**
ALPHA-ARBUTIN
AZELAMIDE MEA
CUCUMIS SATIVUS FRUIT EXTRACT
GLYCYRRHIZA GLABRA ROOT EXTRACT
NIACINAMIDE
- **Slows the photoaging process by increasing the resistance of the skin against the oxidative UV stress**
VITIS VINIFERA FLOWER CELL EXTRA
- **Regenerating, conditioning, and skin repairing action**
CROCUS CHRYSANTUS BULB EXTRACT
AZELAMIDE MEA
SALICYLIC ACID
- **Emollient and hydration action**
GLYCERIN
PHOSPHOLIPIDS
- **Organic conservation technology with no parabens**

Photoaging is the term used for the characteristic changes to skin induced by chronic exposure to UV radiations. It affects primarily face and hands, which are the areas most exposed to sun, and consequently the development of age spots.

Vitis Vinifera stem cells are extracted from a rare variety of Gamay grape that is exceptionally tolerant to UV radiations. This special variety is known for its red flesh and juice due to an extremely high content of *anthocyanin*. As power antioxidants, anthocyanins are excellent free radical scavengers and act as natural sunscreens.

Vitis Vinifera stem cells generate special epigenetic factors and metabolite that:

- Protect human skin against the UV stress
- Preserve the regenerative potency of epidermal stem cells
- Increase the tolerance of skin to UV radiations

Vitis Vinifera stem cells are used in *CHOLLEY Phytocell Harmonizer* to inhibit the photoaging process and consequently to obstruct formation and growth of age spots.

Recommended use

For best results, in the morning and in the evening after a complete cleansing, apply *CHOLLEY Phytocell Harmonizer* to the hyper-pigmented areas of face, neck, décolleté, etc. Use a light massage to absorb the product. During the day for UV protection follow the application of the *CHOLLEY Phytocell Harmonizer* with *CHOLLEY Alpine Solar Defense* SPF 50 as a sun screen.

For additional anti-aging and whitening action we strongly recommend the use of *CHOLLEY Clearing Ampoules* coupled with regular weekly peelings with *CHOLLEY Phyto-Exfoliant Suractivée*. Periodic professional exfoliation with *BIOCLEAN AHA Peeling Program* are also very beneficial.