

## Vitis Vinifera (Grape) Fruit Cell Extract Research Paper

### APPEARS INS



Modern extraction methods have allowed the use of plant stem cells in cosmetics which help to combat fine lines. Three Ships Radiance Cream aims to improve the look of the skin by stimulating and regenerating the natural physiological processes that improve skin condition and protect it from stressors. The Grape Cell Extract used in the Radiance Cream has been shown to stimulate fibroblasts to synthesize collagen, which in turn stimulates skin regeneration and decreases the appearance of fine lines.

### SHOWN TO HAVE GREAT ANTI-AGING CAPABILITIES

Stem cells are found within both plants and animals and are used in-vitro for cell proliferation and differentiation into specialized cells. They also play a role in the growth and repair of damaged tissue of the organism. The grape cultivar used to obtain the Grape Cell Extract used by Three Ships is the Gamay Teinturier Freaux Grape.

The dark purple grape has red flesh attributed to its extremely high anthocyanin content. Anthocyanins are powerful antioxidants that break down the free radicals on our skin that cause photo-aging.



The grape stem cell extract used by Three Ships is taken from the Gamay Teinturier Freaux Grape, however, the exact process of extraction method is proprietary information.

## HAS POWERFUL ANTIOXIDANTS THAT BREAK DOWN THE FREE RADICALS ON OUR SKIN THAT CAUSE PHOTO-AGING

Anthocyanins work as antioxidants by inhibiting some enzymes involved in the radical generation, like lipoxygenase. The number of hydroxyl (OH) groups plays a role in inhibiting free radicals that cause the skin to photo-age.

The hydroxyl groups donate their hydrogen to the free radical form of oxygen and nitrogen in a final reaction that prohibits the free radicals from regenerating. The result of the initial reaction is a radical form of the antioxidant which is more chemically stable than the initial free radical.

### SCIENTIFIC STUDY

#### Studies on the Capabilities of Anthocyanins

One study tested the wound healing effect of anthocyanins derived from the coating of black soybeans with cell migration assays on fibroblasts and keratinocytes found within the epidermis. Fibroblasts are cells within the dermis layer of the skin that are responsible for creating connective cells and help the skin to recover from injury. The cells were treated with various doses of anthocyanins and measured at time intervals of 24, 48 and 72 hours.

From this study it was identified that anthocyanins stimulated both keratinocytes and fibroblasts after 48 and 72 hours respectively, to promote the vascular endothelial growth factor which is necessary for wound healing. Therefore, anthocyanins played a role in stimulating the stem cells that reside in the basal layer of the skin's epidermis.

Gamay Teinturier Freaux Grape Stem Cells provide powerful antioxidants, anthocyanins, that protect the skin stem cells from UV stress by acting as a free radical scavenger, increasing the skin's UV tolerance, and slowing down the effects of UV radiation that can cause the skin to photo-age. This powerhouse active is one of the powerhouse ingredients in the Three Ships Radiance Day Cream where it is used to inhibit free radicals and protect epidermal skin cells.