

PEARL EXTRACT (PWS)

Introduction

Day after day, exposure to UV A and UV B creates sun stressed skin. Dryness causes an uneven skin tone, radiance fades and skin becomes tougher. Pearl Extract (pws), had the 3 answers; viz UV A UV B repair by moisturizing the already sun-stressed and damaged skin to recover its youthful radiance and as skin whitener of the sun browned skin; and further enhancing more protection as novel marine organic filter to the skin from further future UV

Pearl Extract (pws) enhance any skin moisturizer, skin whitener, skin repair and UV protection cosmetic formulations, with active high performance moisturizer action, high performance skin-whitening and repair action and high performance UV repelling actions.

Pearl Extract (PWS) is produced from Japan Inland Sea Freshwater Oyster cells that are cloned and tissue-cultured in industrial biotechnological vats, to secrete pearl secretions at regular intervals, and the pearl secretion are collected before being calcified or harden; and freeze-dried and lyophilized. Pearl Extract (pws) is a natural, pure and high quality product which has internal uses in Kampo, Chinese and Oriental Traditional Herbal Medicine as well as in Modern Western Cosmetic products.

Pearl Extract and various other derivatives of Pearl were first tested in 1988 at a reputable Japanese University for a multi-national Japanese Drug Co., for Sun-Screen and Skin self-repair against UV-induced immuno-suppression which caused diseases to proliferate; such as measles and other viral disease that elicit a rash ie; poxes and herpes; parasitic diseases introduced via the skin i.e. malaria, dengue fever and leishmaniasis; and some fungal diseases (see UN environmental report 1989 and Update 1991).

As it is now known that unlike the more commonly known threats of skin-cancers and cataracts which take years of exposure of Sun-UV before being full-blown, UV-induced immuno-suppression (effects of the sun on the immune system) effects are immediately damaging. The UV rays affect the skin's ability to detect whether it (skin) is infected by altering the Langerhans cells, thereby reduce the immune-response to the infection and allows viruses to attack more easily (see graphic in Sun and The Harm).

The depletion of the ozone layer, has now more effect on the amount of sun-UV reaching earth, putting population of the world to great-risk of UV-induced immuno-suppression (according to United Nation doctors who wrote the report and update)(see also UVzymes literature volume 1, 2, & 3).

Pearl Extract (pws) entirely dissolves in water (preferably at 70 °C) and 95 - 99% is absorbed by the skin (four times the absorbitivity of the ordinary pearl-powder); it consists of complex of amino acids which exists as organic matter and over a dozen of metal elements: (via Spark Mass-Chromotograph Analysis)

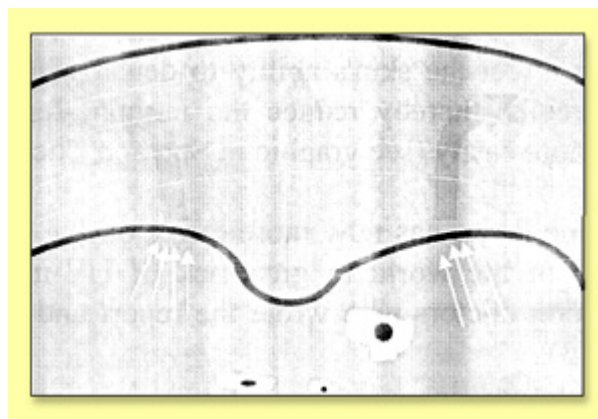
Calcium (as CaCO ₃)	min 90%
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Amino acids	min 5.5 - 6.5%
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Germanium-organic	min. 0.005%
Strontium –organic	min. 0.001%
Selenium-organic	min. 0.03%
Zinc complex-organic	min. 0.10%
Mercury	0.001 ppm max
Other Heavy Metals	0.05 ppb max
Arsenic	not detected
Lead	0.80 ppm
Copper	0.19 ppm
Bezoar acid	0.010%
Other Trace Elements	2.00 ppm

Once it is drawn and absorbed into the skin, it is able to nurse and maintain the skin through participating in enzymatic metabolic activities and promotes the skin growth of new cells and replenish the surface skin to make the skin smooth, fine, elastic and naturally white and beautiful. The other main actions are of promoting the activities of SOD and prevention of the melanin formation

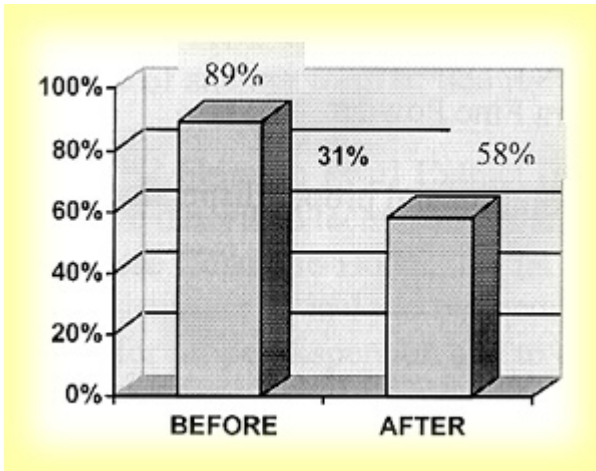
(without inhibiting the melanin formation but reducing the the formation of the dark pigmented melanin into colorless and invisible but photo-protective functional melanin-known as leuco-melanin) and further whitening the skin and prevention of skin senility and repair thereof, because SOD has the function of clearing the skin of cellulite natured toxins. It is also suitable for creams to heal minor slow healing wounds, removes boils, colour spots and blemish. It further acts as an extension to the exfoliators like Alpha & Beta-Hydroxy Acids, reducing the harshness caused by the AHA and BHA.



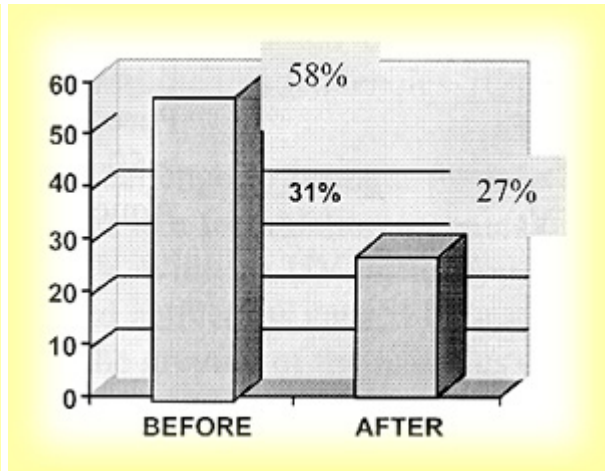
Youthful epidermis after regular applications
With Pearl Extract pws aqueous solution (1:1 w/v)
See below for continuation of this diagram

EFFICIENCY TEST

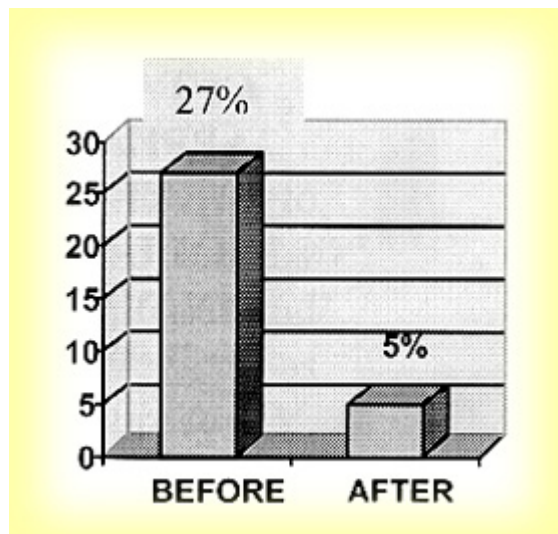
Decreasing of the Trans Epidermal Water Loss (TEWL) in proportionate sequence decreasing via daily application.



DAY 1 APPLICATION



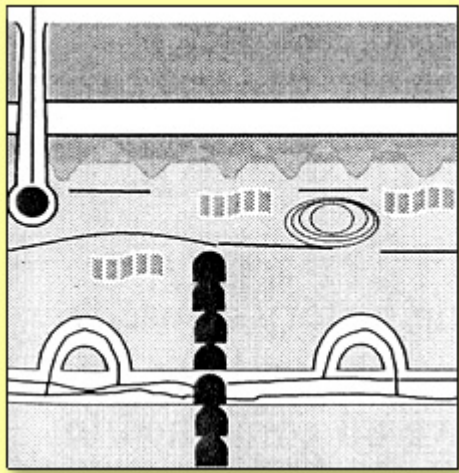
DAY 2 APPLICATION



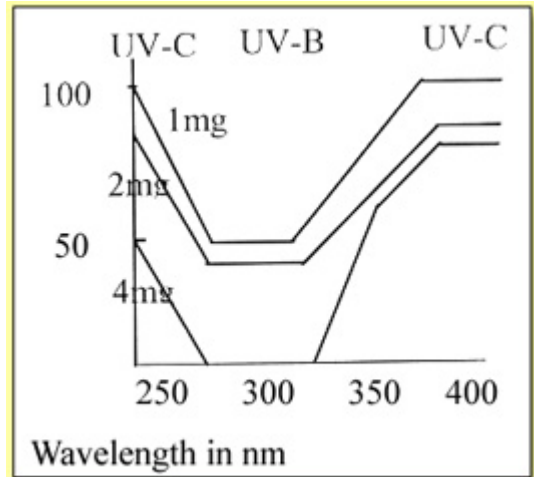
DAY 10 and there-after applications
(Re-balanced Normal Youthful Skin's TEWL)

LITERATURE REFERANCE :

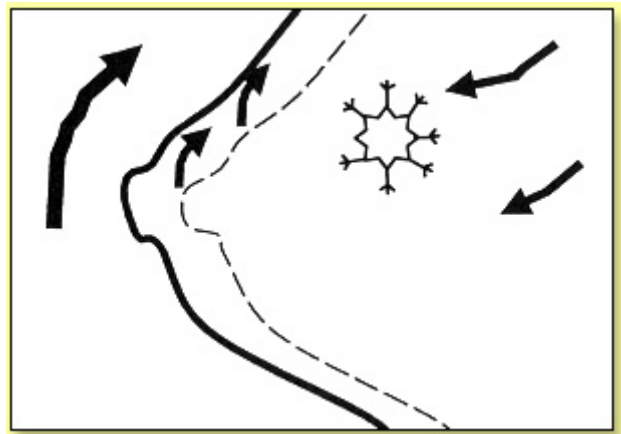
United Nations Environment Programme (UNEP) report 1989; titled :
 Environmental Effects of Ozone Depletion; and its update in 1991.
 Dr. Jan van der Leun (author) and chairman of UN Committee on Effects of UV rays
 Further reading request for Dr. Balasubramaniam M's treatise and commentary on UNEP
 report 1991 (see sun and the harm)



Cellulite Treatment with Pearl Solution (1:1 w/v)



Dependance of the Transmittance on Filter Concentration (mg per 100ml) at a cell thickness of 1cm



UV-Damaged Langerhan Cells revitalization with pearl extr.pws cream