



phenbiox

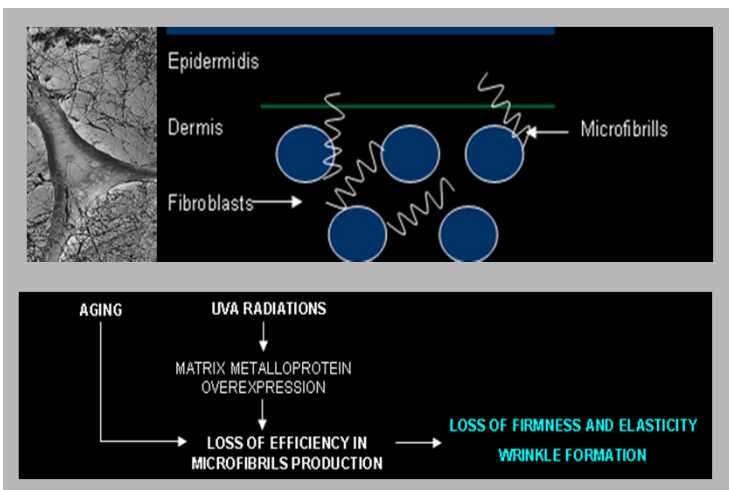
CRUOX®

Wrinkles plumped up from inside

Viscoelasticity + 33% Roughness - 21%

WRINKLES AND MICROFIBRILLS

Dermis, the supporting structure of epidermidis, is essentially constituted by connective tissue: fibroblasts, collagen microfibrils, elastin and peptido-glycans. Fibroblasts are responsible of skin firmness and elasticity maintaining the dynamic equilibrium between synthesis of new microfibrils and degradation of old ones (due to matrix metalloprotein MMP). The formation of gravity and expression wrinkles is due to loss of skin firmness and elasticity generally caused by aging or photo-aging in healthy people. In mature skin there is a loss of efficiency of fibroblast metabolism that produces microfibrils at a lower rate. UVA exposure is responsible for an over expression of MMP from fibroblasts also in young skin, increasing the rate of fibril degradation that leads to a loss in firmness.



OUR PRODUCT

The biotechnological processes used to manufacture CRUOX (bioliquefaction technology) allows us to obtain 100% of Wheat Bran protective chemistry in a bio-available form. The biocatalysts employed cut at a molecular level all the polymeric structures releasing in the water phase a high content of arabinoxylans and biophenols, mostly Ferulic Acid, that are generally covalently linked to the hemicellulosic backbones of the bran, and therefore insoluble. (Fig1).

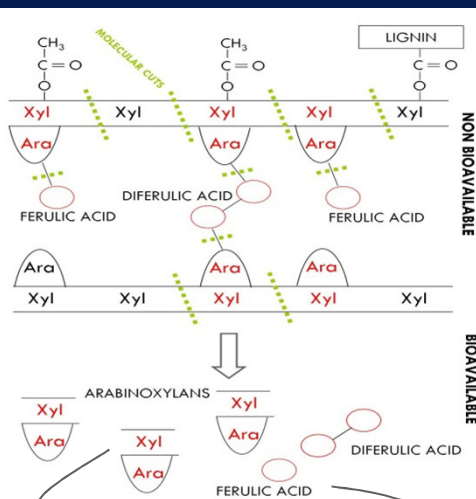
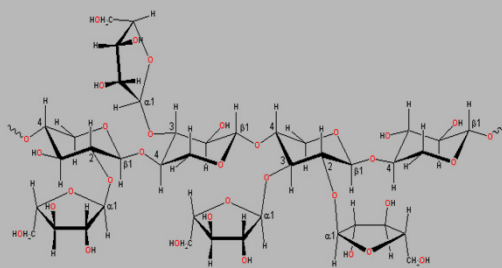


Fig.1 Wheat Bran molecular structure / Selected enzymes. 100% of wheat bran chemistry in bio-available form Molecular cuts

Fig.2 Arabinoxylans



CRUOX is bio-liquefied wheat bran acting on wrinkles due to its complex and highly bio-available chemistry (ferulic acid + di-ferulic acids + Arabinoxylans) reactivating the microfibril synthesis that plumps up wrinkles from inside.

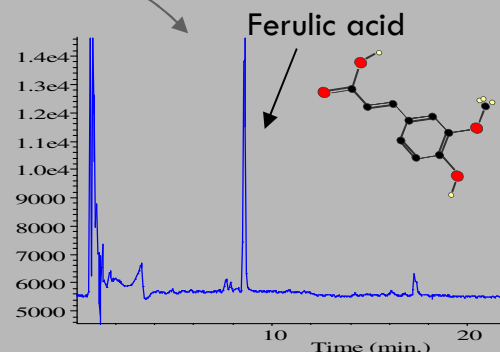


Fig.3: HPLC spectrum at 280nm of CRUOX phenolic fraction

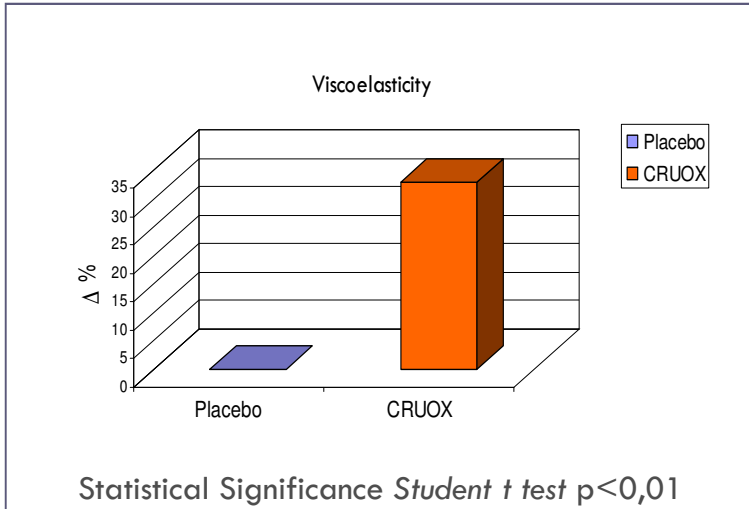
IN VIVO TESTS

CRUOX efficacy was proved both for skin elasticity and anti-wrinkle effect on 10 healthy volunteers of both sexes aged from 30 to 50.

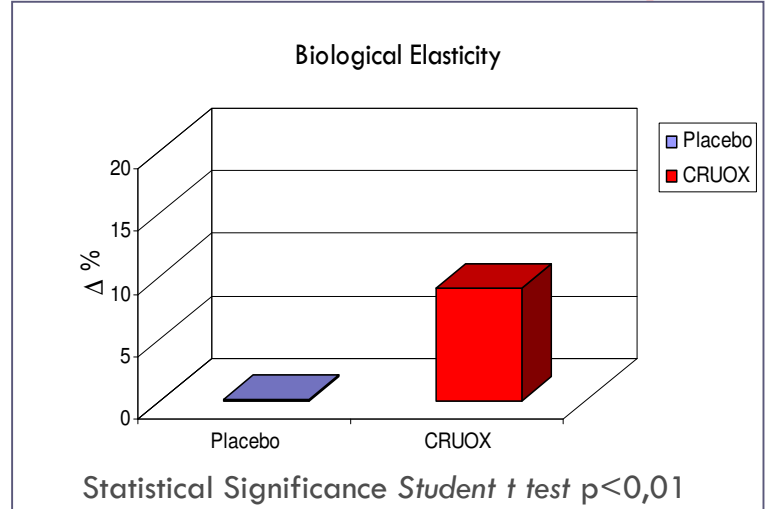
A cosmetic formulation containing CRUOX 5% and a placebo were applied ONCE per day onto the volar surface of the forearm for 4 weeks.

Data are expressed as difference (%) vs placebo.

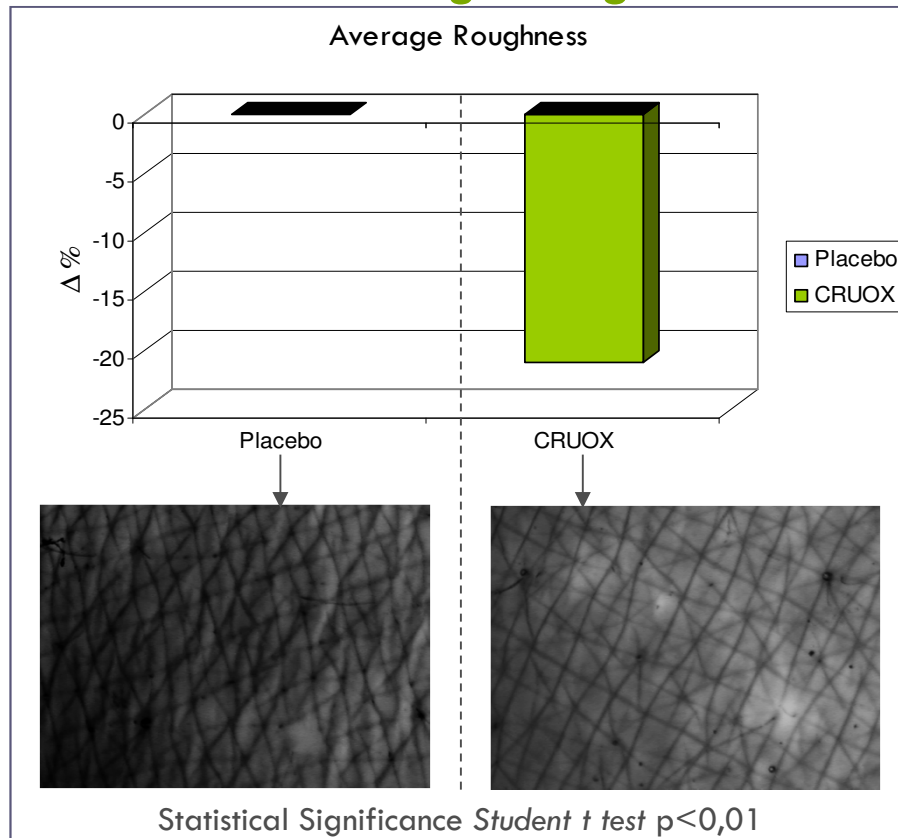
+ 33% Viscoelasticity



+ 9% Biological Elasticity



- 21% Average Roughness



BECAUSE OF ITS COMPLETE MIX OF MOLECULES (FERULIC ACID + DI-FERULIC ACIDS + ARABINOXYLANS) CRUOX IS THE IDEAL ACTIVE PRINCIPLE IN FORMULATIONS DEDICATED TO PREVENT AGING AND PHOTO-AGING AND TO TREAT STRESSED SKIN IN SUNSCREENS, AFTER SUN LOTIONS AND POST SUMMER SKIN REPAIR TREATMENTS

PRODUCTION TECHNOLOGY: controlled bioliquefaction technology

INCI NAME: Hydrolyzed Wheat Bran

SUGGESTED CONCENTRATION: 3 – 5%

ORGANIC PRODUCTS
CERTIFIED BY

