

NATIONAL CENTER FOR SCIENTIFIC RESEARCH CNIC.



Its task is to create competitive advanced products for the worldwide market. The institution works in a full cycle manner, from research, manufacturing and commercialization. CNIC has gained from its foundation a lot of experience in research and marketing of Natural products. CNIC belongs to BIOCUBAFARMA

Our Institution was created in 1965. It is a multidisciplinary research Center, with several subjects of investigations:

✓ **NATURAL PRODUCTS**

- ✓ **DEVELOPMENT OF VACCINES AND MODIFIED ANTIGENS**
- ✓ **MEDICAL DEVICES, EQUIPMENTS AND SUPPLIES: OZONE GENERATOR MACHINES**
- ✓ **SCIENTIFIC AND TECHNICAL SERVICES**
- ✓ **40 years investigating on Natural Products with different approaches, publishing the results obtained.**
- ✓ **30 years working in a closed cycle scheme with a line of products.**
- ✓ **20 years with presence in the international market.**

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For a healthy life

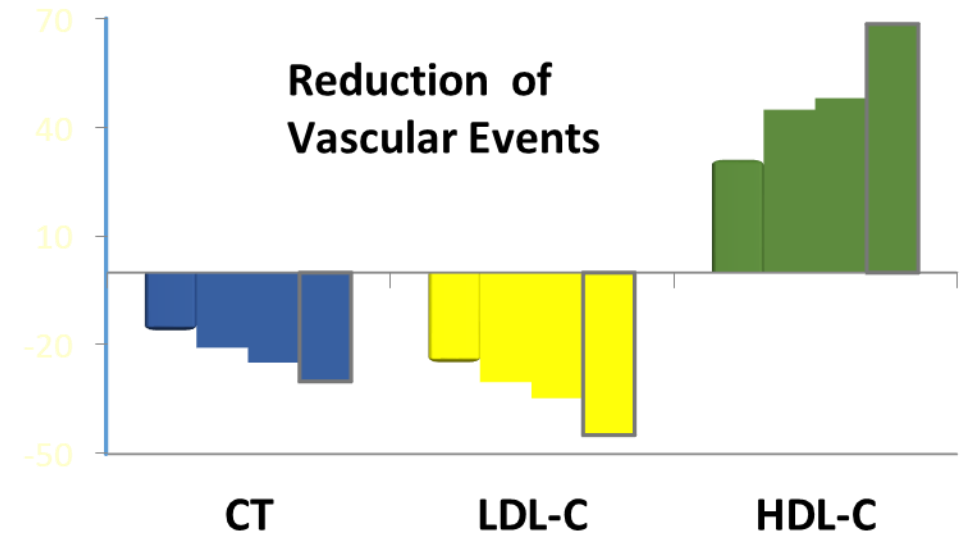


ATEROMIXOL® | PPG® /DUPLA® (Policosanol 5mg, 10mg and 20mg)

*Policosanol is purified from sugar cane wax, containing a mixture of 8 higher aliphatic alcohols (≥90%), The most abundant alcohol is **OCTACOSANOL**, followed by **TRIACONTANOL** and **HEXACOSANOL***

- ✓ **Lowers serum LDL-C (bad cholesterol) and serum TC. Increases serum HDL-C (good cholesterol) and its functionality.**
- ✓ **Protects LDL –c against peroxidation.**
- ✓ **Inhibits platelet aggregation.**

- ✓ **Help to relief impaired peripheral blood circulation symptoms, as in Intermittent Claudication.**
- ✓ **In patients with recent Ischemic Stroke, improves Neurological recovery and seems to prevent recurrence of events.**
- ✓ **Assist in general health maintenance as in improving physical activity and well being.**
- ✓ **Has a very good safety and tolerability,**



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NATURAL PRODUCTS. Food supplement from Sugar Cane wax

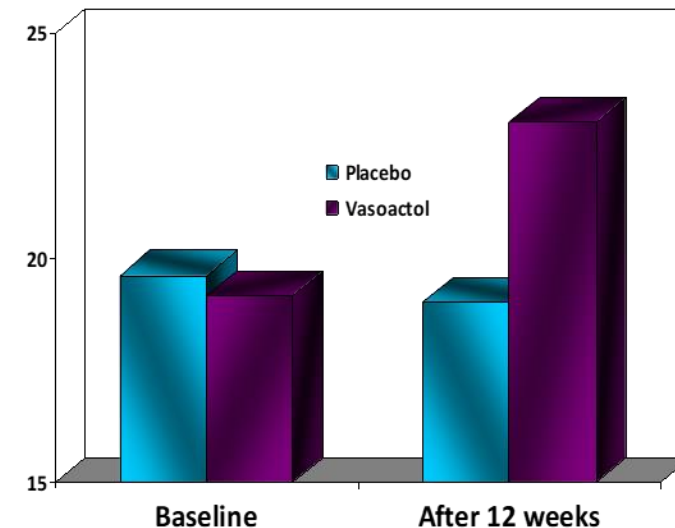


VASOACTOL® (6 mg tablet)

Purified extract from **sugar cane wax**. Its main components are saturated and non-saturated fatty acids and primary long chain aliphatic alcohols present in the mixture in the range ≥ 85 and $< 90\%$.

Vasoactol prevents oxidative stress with ergogenic effects.

- ✓ Protecting agent against lipid and protein peroxidation.
- ✓ Helps to control lipid metabolism.
- ✓ Increases V_{\max} O_2 and maximal load
- ❑ Increases physical performance and functional capacity.
- ❑ Increases general welfare



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NATURAL PRODUCTS. Food supplement from Bees wax



ABEXOL® (50 mg tablets)

Mixture of 6 higher aliphatic alcohols isolated and purified from bees wax whose main component is **triacontanol**.

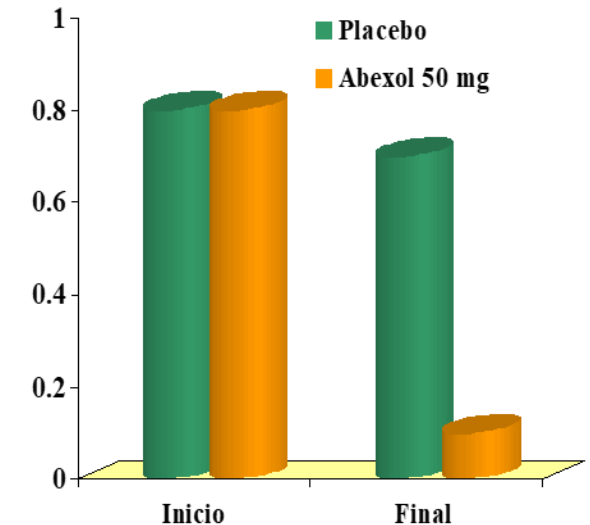
It protects against induced damage by oxidant agents: **Helicobacter pylori**, NSAID, alcohol,

- ✓ *Reduces lipid peroxidation*
- ✓ *Increases antioxidant response of the organism.*

Other effects:

- ✓ *Dual antinflammatory action: Inhibition of COX and LOX*
- Positive effects on gastric and duodenal mucose.*
- Beneficial action to manage OSTEOARTHRITIS symptoms*
- Improves health well being.*

Improvement of gastrointestinal symptoms in the elderly. A 6 months study



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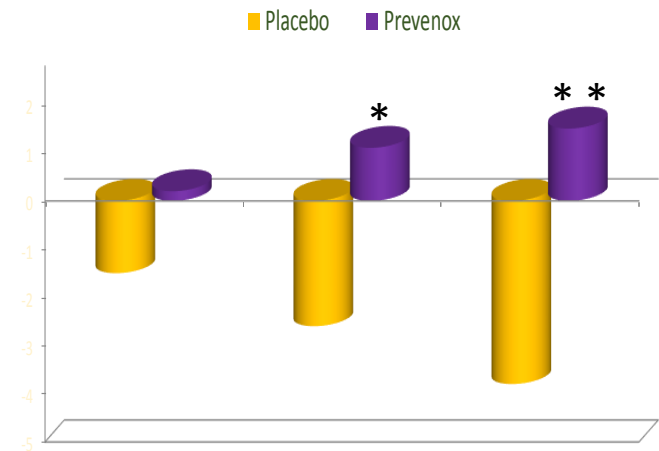


PREVENOX[®] (5 mg tablets)

Mixture of very heavy aliphatic acids purified from **sugar cane wax**, its main component is octacosanoic acid.

Antioxidant effects with beneficial impact on osteomioarticular system.

- ✓ *Increases resistance against LDL-C oxidation and plasma oxidative capacity.*
- ✓ *Beneficial effects on lipid metabolism.*
- ✓ *Improves pain and disturbances, focus on back pain, improving daily living activities and physical function*
- ✓ *Beneficial effects on biochemical osteoporosis markers in postmenopausal women, after 6 months of treatment.*
- ✓ *Increases bone mineral density, after three years of treatment.*



Course of Bone Mineral Density (BMD) in lumbar column in postmenopausal women

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NATURAL PRODUCTS. Food Supplement from Royal Palm Fruits



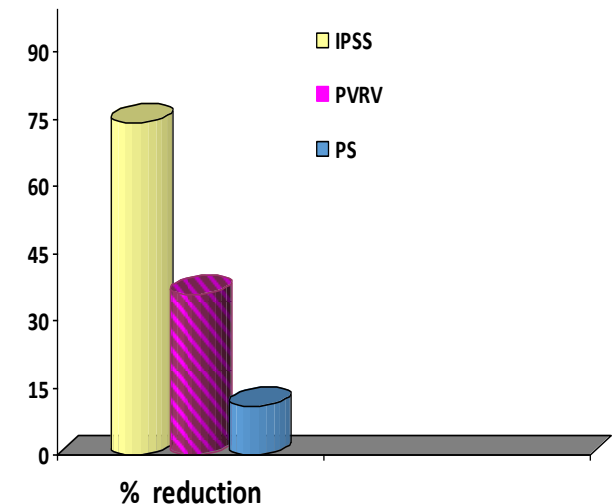
PALMEX[®] (soft gels 320 mg)

*Lipid extract of **Royal palm fruit**, it is a mixture of free fatty acids, with **oleic , lauric, miristic and palmític acids** as principal components.*

Increases antioxidant response of organism.

- ✓ Antioxidant. Reduce lipid and protein oxidation .
- ✓ Inhibits 5 α reductase enzyme and has shown a non competitive blockade of adrenergic α receptors.
- ✓ Similar pharmacological activity to Saw palmetto . It significantly reduces LUTS evaluated by IPSS.

Effects of PALMEX on IPSS, PVRV & PS



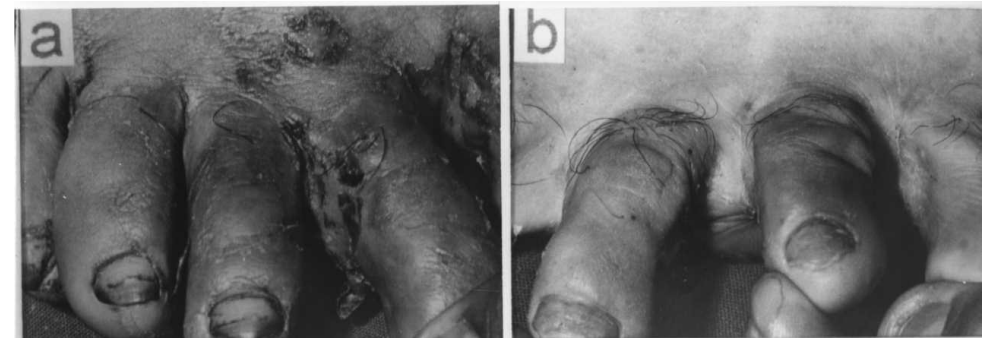
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Ozonized sunflower oil: OLEOZON for external use



**Effective in the treatment of
infection of skin and faeneras**

- ✓ Potent fungicide action.
- ✓ Potent action against microorganism.



**Indications: Epidermophytosis and
impetigo**

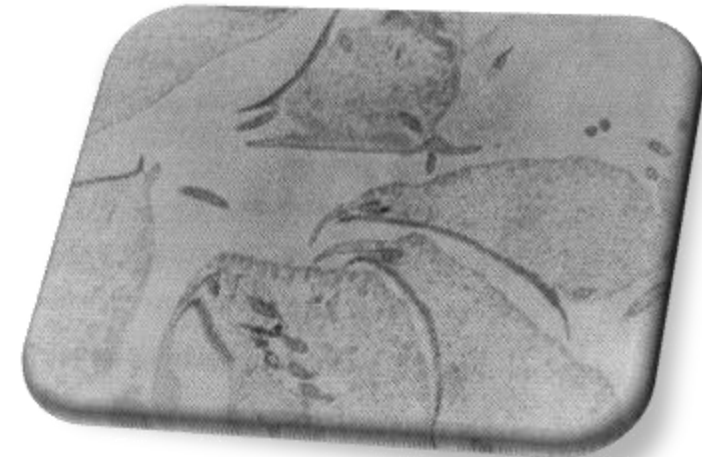
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Ozonized sunflower oil: OLEOZON for oral use



**Effective in the treatment of
Giardiasis**

- ✓ *Antiparasitary effect*
- ✓ *Potent germicide action*



***Rupture of the trophozoite wall (death)
after Oleozon treatment.***

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DALMER COSMETIC

SOAP OF OZONIZED SUNFLOWER OIL

DALMER
COSMETICA

Ozonized sunflower oil is used as an active ingredient in the formulation of dermatological soaps, dry skin get better and acting as a germicide.

Great for treating microbial infections of the skin such as acne

- ✓ It works efficiently on porous skin, eliminating dermatitis and associated bacterial infections.
- ✓ Removes dead cells from the pores, so that helps keep the skin clean and increases tissue oxygenation and contributes to the formation of vitamin D in the skin, helping to keep it young and supple.
- ✓ Its penetration through skin achieves desired effect helping to obtain a dermal recovery, it shows cleansing, protection and care of acid layer of the skin.



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NATURAL PRODUCTS: NUTRACEUTICALS

SACHA INCHI oil

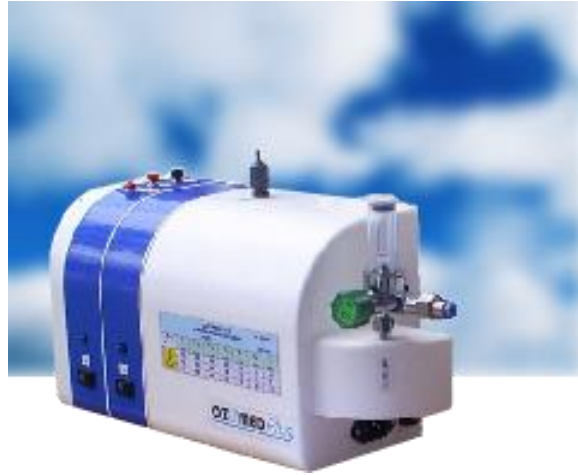


Lipid extract obtained from this plant (*Plukenetia volubilis L.*), is native to Peruvian Amazon. It contains unsaturated fatty acids: Omega 3, Omega 6 and Omega 9. It was introduced in Cuba in 2015. Oil extraction process from its seed was initiated in the country during 2016 and 2017, being registered in CUBA after several tests were conducted with a joint work between CNIC and Center for Protein Plants and Bionatural Products

Fatty acid PUFA/MUFA	Content (%)
ω 3 (α LA)	50.2
ω 6 (α Linoleico)	38
ω 9 Oleico	9

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OZOMED PLUS

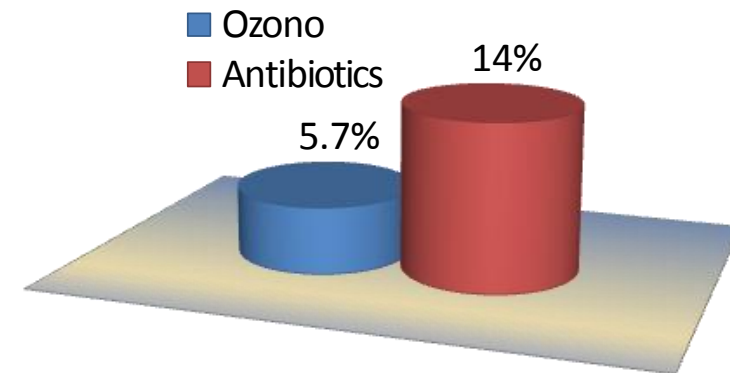


Model of the line equipment for therapeutic medical uses an MODULAR DESIGN, in its generation system.

Ozonotherapy

✓ *Allows application of all administration routes: rectal insuflation and cavities, intramuscular injections, and autohemotherapy*

Diabetic Foot



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ACTIVE INGREDIENT PLANTS (Natural Products) : *VOLUME and YIELD*



**SCIENTIFIC-TECHNICAL PROJECT: Increase of PRODUCTION CAPACITY and
PROCESS EFFICIENCY: Royal palm fatty acids extract**

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FINISHED SOLID ORAL FORMS PLANT (Natural Products) : TABLETS, CAPLETS



Manufacturing of Natural Products from CNIC:
PPG, Vasoactol, Abexol, Prevenox.



**Manufacturing of Natural Products from BIOCEN , Laboratorios Oriente.
Maquila Service**

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MANUFACTURING of COSMECEUTICALS with NATURAL PRODUCTS



- Manufacturing of creams and gels with ozonized oil, natural active ingredients from CNIC and other institutions.
 - Maquila Service

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THANKS FOR YOUR ATTENTION

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