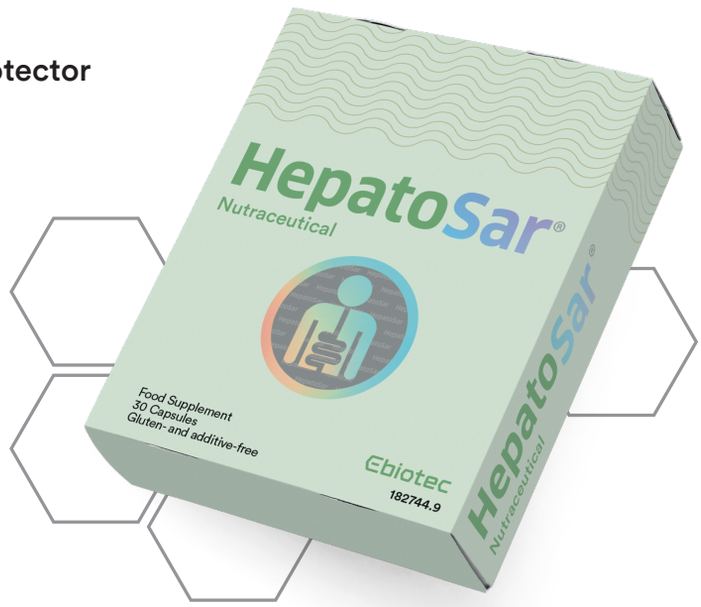
HepatoSar®

Nutraceutical

Ebiotec

Data Sheet

Liver protector



BRAND NAME
HepatoSar®

MANUFACTURER
EuroEspes Biotechnology S.A. (EBIOTEC).

NATIONAL CODE (SPAIN)
182744.9

ORIGIN
Sardina pilchardus (European sardine, *Clupeidae* family) and *Cynara scolymus* L.

PRODUCT
E-SAR-94010® + *C. scolymus* L. standardized.

STUDIES
Supported by basic and clinical scientific studies (*see bibliography*).

COMMERCIAL PRESENTATION
Box of 30 capsules, containing 3 blisters and one leaflet.

RECOMMENDED DOSE
3 capsules/day during meals. Recommended treatment for a minimum of 3 months.

COMPOSITION
200 mg of E-SAR-94010®, extract of *Sardina pilchardus* + 150 mg of 5% Artichoke extract, in hard gelatin capsules.

What is HepatoSar?

HepatoSar® is a with 100% natural ingredients nutritional supplement obtained from the muscle of the marine species *Sardina pilchardus* (European sardine, family *Clupeidae*), by non-denaturing biotechnological processes that enable the preservation of all the healthy properties of the original species, accompanied by a purified artichoke extract (*Cynara scolymus* L.) standardized at 5%.

Composition

E-SAR-94010® extract + *Cynara scolymus* L. standardized at 5%. Marine proteins of high biological value. Essential fatty acids, omega 3, 6 and omega 9. Vitamins, essentially D, B_{12} and B_6. Minerals, essentially potassium and phosphorus.

Reference Analysis per 100 g

PROTEINS: 30 - 45%

Amino acids %	
GLUTAMIC ACID	6.0
LYSINE	3.7
LEUCINE	3.2
ARGININE	2.6
ALANINE	2.5
VALINE	2.2
GLYCINE	2.2
THREONINE	1.9
ISOLEUCINE	1.8
SERINE	1.7
PROLINE	1.6
PHENYLALANINE	1.6
METHIONINE	1.2
TYROSINE	1.2
HYDROXYPROLINE	0.2

LIPIDS: 7 - 13%

Saturated (% in Lipids)	
PALMITIC	30.9
MYRISTIC	8.9
STEARIC	6.2

Monounsaturated (% in Lipids)	
OLEIC	14.6
PALMITOLEIC	8.5
GADOLEIC	7.0

Polyunsaturated (% in Lipids)	
ARACHIDONIC	11.0
EICOSATRIENOIC	5.3
DHA	2.6
EPA	2.0
LINOLEIC	1.2
LINOLENIC	1.1

MINERALS	
POTASSIUM	2517.0 mg
SODIUM	959.0 mg
CALCIUM	434.0 mg
PHOSPHORUS	357.0 mg
MAGNESIUM	127.2 mg
IRON	5.0 mg
ZINC	4.5 mg
MANGANESE	0.6 mg
COPPER	0.3 mcg

VITAMINS	
PANTOTHENIC ACID	1.8 mg
VITAMIN C	0.4 mg
VITAMIN D	5.0 mcg

CARBOHYDRATES 33 - 44 %

INUTRITIONAL ANALYSIS	(per 3 capsules)
ENERGY VALUE	17.40 kJ 4.15 kcal
TOTAL FATS	105 mg
OF WHICH SATURATES	66 mg
TOTAL CARBOHYDRATES	390 mg
OF WHICH SUGARS	61.5 mg
PROTEIN	411 mg
SALT	24 mg
E-SAR-94010®	600 mg
ARTICHOKE EXTRACT	450 mg

Note: For health professionals only

The information contained in this data sheet is directed to health professionals.

Bibliography

Corzo L, Fernández-Novoa L, Carrera I, Martínez O, Rodríguez S, Alejo R, Cacabelos R. 2020. Nutrition, Health, and Disease: Role of Selected Marine and Vegetal Nutraceuticals. Nutrients, 12(3):747.

Cacabelos R, Lombardi VRM, Fernández-Novoa L, Carrera I, Cacabelos P, Corzo L, Carril JC, Teijido O. 2018. Chapter 6 - Basic and Clinical Studies With Marine LipoFishins and Vegetal Favalins in Neurodegeneration and Age-Related Disorders, 59:195-225.

Cacabelos R. 2005. Role of Nutrition in the Prevention of Alzheimer Disease. Aging Health, 1: 359-362.

Cacabelos R. 2005. Pharmacogenomics, nutrigenomics and therapeutic optimization in Alzheimer's disease. Future Medicine. Aging Health, 1(2):303-348.

Cacabelos R, Vallejo AI, Lombardi VRM, Fernández-Novoa L, Pichel V. 2004. E-SAR-94010®: a pleiotropic lipoprotein compound with powerful anti-atheromatous and lipid lowering effects. CNS Drug Reviews, 10(2).

Lombardi VRM, Cagiao A, Fernández-Novoa L, Álvarez XA, Corzo MD, Zas R, Sampedro C, Cacabelos R. 2001. Short-term food supplementation effects of a fish-derived extract on the immunological status of pregnant rats and their sucking pups. Nutrition Research, 21:1425-1434.

Lombardi VRM, Cacabelos R. 1999. E-SAR-94010®: a marine fish extract obtained by advanced biotechnological methods. Drugs of the Future 24(2): 167.

WHAT IS A NUTRACEUTICAL?

Nutraceuticals are products derived from natural sources whose nutritional and functional characteristics provide benefits to help improve health and therefore reduce the risk of suffering diseases; they may be combined with other active ingredients or exogenous nutrients such as vitamins, minerals, antioxidants, fatty acids, etc.; however, this type of products, which cover a wide range of possibilities, should be taken as part of a healthy, balanced diet and never as a replacement for it.

Indications

Main benefits: HepatoSar® is a liver protector. It is recommended for boosting hepatobiliary function and improving gallbladder function, forestalling the risk of gallstone formation. HepatoSar® helps the digestive system, improving the digestion of fats, and normalizes the plasmatic activity of hepatic transaminases (GOT, GPT and GGT).

Other benefits: HepatoSar® balances the levels of cholesterol, triglycerides, glucose, and uric acid in the blood. HepatoSar® is recommended for contributing to the maintenance of cardiovascular health.

Cynarin: A hydroxycinnamic acid and a biologically active chemical constituent of artichoke. Chemically, it is an ester formed from quinic acid and two units of caffeic acid. It is present in artichoke leaves, with beneficial effects on the control of gallstones, control of cholesterol levels, and improves gallbladder function. Cynarin is the most remarkable active component of the artichoke. It is thanks to this substance that this plant is considered a medicinal food, a "superfood". All the beneficial effects on the organism are derived from its condition as a stimulator of bile secretion (choleretic effect). Its use is recommended in cases of non-ulcer dyspepsia, i.e. disorders that occur when foodstuffs are not digested well and cause slow and heavy digestion. Its use is also recommended with heavy or fat-rich foods.

Nutritional properties

1. E-SAR-94010®, extract + *Cynara scolymus* L. extract is the structural base of HepatoSar®. It contains all the biological properties of the original species.
2. Lyophilization is the core technology used in the manufacture of HepatoSar®. This technology enables the extraction and concentration of nutrients and active molecules in a pharmaceutical form. The application of this technique enables all the healthy properties of the original raw material to remain unchanged.
3. HepatoSar® contains essential fatty acids omega 3 (EPA and DHA), omega 6 (linoleic acid), and omega 9 (oleic acid). The omega 3 and 6 fatty acids accomplish fundamental physiological functions in the organism, and have important health properties, the most notable being cardioprotection.
4. HepatoSar® contains proteins with a high nutritional value due to its content in essential amino acids. Proteins are fundamental structural and functional elements within each cell of the body and are involved in a wide range of physiological functions. All cells, tissues and organs contain proteins that are essential for their growth and repair, and therefore for the maintenance of good health.
5. HepatoSar® contains vitamins, mainly D, B_{12} and B_6. Minerals, such as potassium and phosphorus.

Precautions

HepatoSar® contains a purified extract of blue fish. HepatoSar® should not be given to people with biliary obstruction. Not indicated for use during pregnancy or lactation without medical supervision. Not suitable for persons allergic to any of its ingredients. Not suitable for people with phenylketonuria. Do not exceed the recommended daily dose. Keep out of the reach of children. Should not be used as a substitute for a balanced diet.

Does not contain gluten or aditives.

General Health Register
Nº: 26.06671/C

Customer hotline:
+34 981 784 848 / +34 981 780 505

MANUFACTURED BY:
EuroEspes Biotechnology (EBIOTEC)
Pol. Ind. de Bergondo
Parroquia de Guísamo, Parc. A6 - Nave F
15165 Bergondo. Corunna (Spain)

www.ebiotec.com | info@ebiotec.com

Ebiotec
EuroEspes Group

ISO 9001 CERTIFIED COMPANY

OUR OWN MANUFACTURING PROCESSES:

HepatoSar® is a nutritional supplement belonging to the marine line of nutraceuticals developed and manufactured by EuroEspes Biotechnology S.A. (Ebiotec).

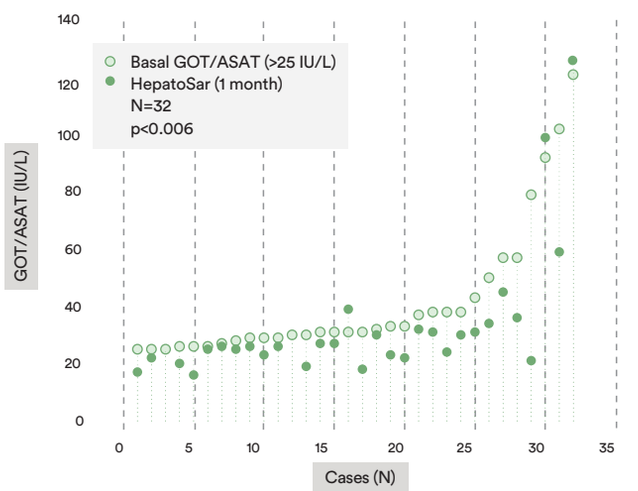
The nutraceutical bioproducts manufactured by EuroEspes Biotechnology are not limited to a particular nutrient (e.g. omega 3) or to a set of minerals and vitamins, or a specific protein complex, but because of their structure they contain a set of healthy substances that will help in many aspects of life for the maintenance of good health. Origin: A single species. The raw material comes from sustainable fishing, which is not the case of some omega 3 that comes from endangered species or species that maintain the balance of the trophic chain of oceans and seas. Our products are 100% natural and in the manufacturing process no synthetic chemical industrial processes are used (free of additives, etc).

Scientific Studies

01. HepatoSar® supplementation in humans decreases the plasmatic levels of liver aminotransferases and total cholesterol.

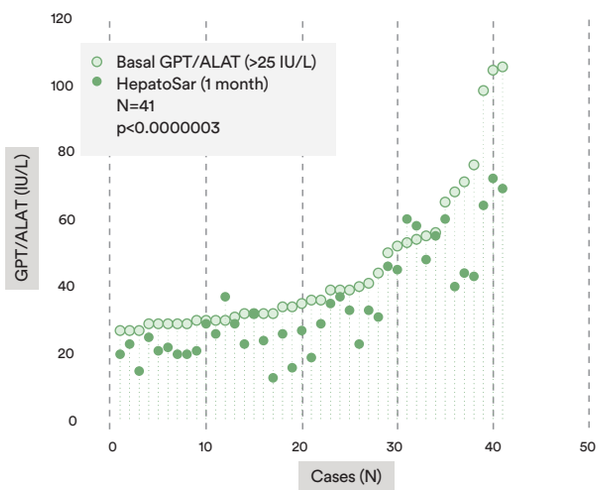
The transaminase enzymes are important in the production of various amino acids, and measuring the concentrations of various transaminases in the blood is important in the diagnosing and tracking many diseases. The presence of elevated transaminases can be an indicator of liver and cardiac damage.

HepatoSar® induced GOT changes.



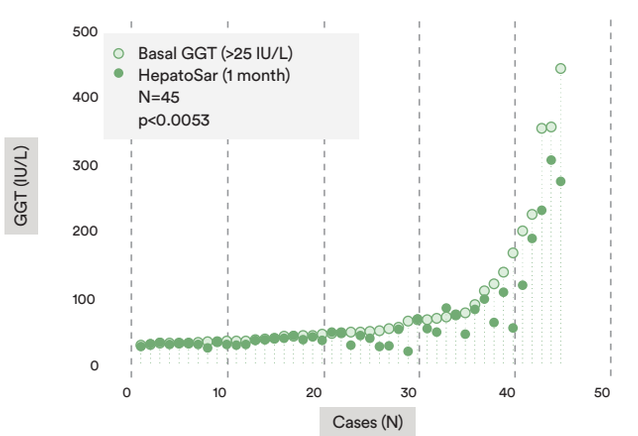
HepatoSar®, 3 capsules/day during 1 month, in 52 patients induced a decrease in GOT plasmatic levels.

HepatoSar® induced GPT changes.



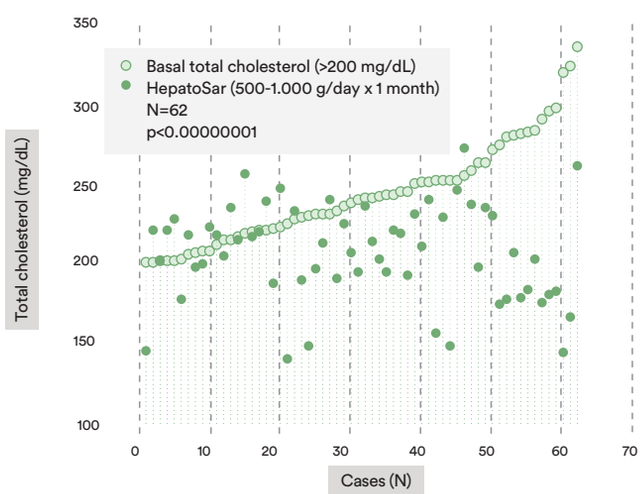
HepatoSar®, 3 capsules/day during 1 month, in 52 patients induced a decrease in GPT plasmatic levels.

HepatoSar® induced GGT changes



HepatoSar®, 3 capsules/day during 1 month, in 52 patients induced a decrease in GGT plasmatic levels.

HepatoSar® induced total cholesterol level changes



HepatoSar®, 500 mg/day or 1000 mg/day during 1 month, in 52 patients induced a decrease in total cholesterol plasmatic levels.

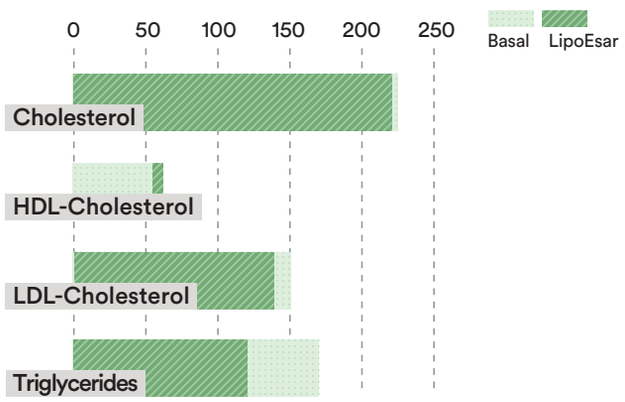
Note: For health professionals only

The information contained in this data sheet is directed to health professionals.

02. The physiological effects of LipoEsar® supplementation on patients suffering from chronic dyslipidemia.

Three hundred patients diagnosed with chronic dyslipidemia were supplemented with 750mg (3 capsules a day) of LipoEsar® and advised to follow a low-fat diet for a period of 3 months. Their total plasma biochemical levels were recorded prior to and after study.

Effects of LipoEsar® supplementation on lipid parameters in patients with chronic dyslipidemia (mg/dL)



In patients with chronic dyslipidemia, **LipoEsar®** supplementation (750 mg/day) for 3 months decreased:

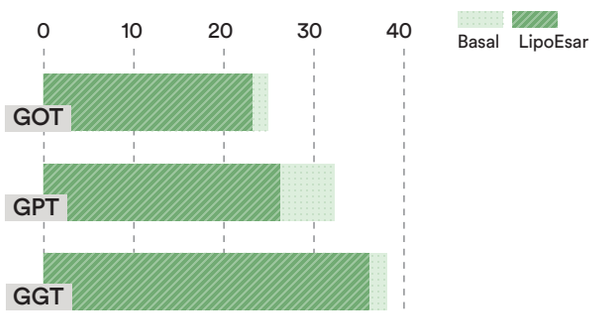
- Cholesterol levels by 5-12%
- Triglyceride levels by 29%
- LDL-cholesterol levels by 8%

And increased:

- HDL-cholesterol levels by 13%

Daily supplementation with **LipoEsar®** exerted a hypolipidemic effect on chronic dyslipidemic subjects in only 3 months.

Effects of LipoEsar® supplementation on hepatic parameters in patients with chronic dyslipidemia (mg/dL)

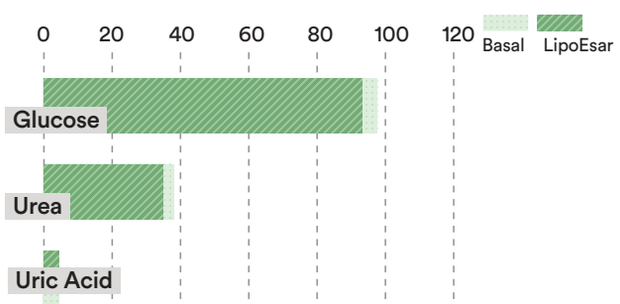


In patients with chronic dyslipidemia, **LipoEsar®** supplementation for 3 months (750 mg/day) changed hepatic parameters:

- GOT levels decreased by 8%
- GPT levels decreased by 19%
- GGT levels decreased by 7%

LipoEsar® exerts a hepatoprotector effect, decreasing plasma levels of hepatic enzymes.

Effects of LipoEsar® supplementation on glucose and urea levels in patients with chronic dyslipidemia (mg/dL)



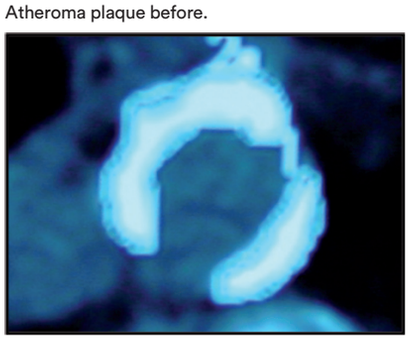
In patients with chronic dyslipidemia, **LipoEsar®** supplementation during 3 months (750 mg/day) altered plasma levels of glucose, urea and uric acid:

- Glucose levels decreased by 5%
- Urea levels decreased by 8%
- Uric acid levels decreased by 12%

03. Effects of LipoEsar® on the atheroma plaque of the abdominal aorta of patients suffering from chronic dyslipidemia.

Thirty patients diagnosed with chronic dyslipidemia had developed atheroma plaques in their abdominal aorta, as shown by the CT-SCAN. The group of 30 patients were supplemented with LipoEsar® (1500 mg per day) for 3 months. Daily oral supplementation of LipoEsar® for 3 months reduces the average size of atherosclerotic plaques on the aortic wall by 10%, in patients with chronic dyslipidemia.

Atheroma plaque before.



Atheroma plaque after LipoEsar® 90 days