zeyton

a unique combination of technologies to transform olive biomass into high-value natural products for the food, nutraceutical, and cosmetic industries

Zeyton Nutraceuticals is a technological start-up specializing in 100% natural olive polyphenols, the minor components that give olive oil a healthy brand and are a unique part of the Mediterranean diet.

view more>

Products

Zeyton specializes in the recovery of polyphenols from olive mill biomass to produce wholly natural, stable products. These can be either liquid water solutions or solid powders, with standardized content in polyphenols.

view more>

Projects

Zeyton has been the recipient of financial support from the Portuguese Government and the European Union through approved projects in competitive calls.

view more>

About us

Established right at the heart of the Portuguese most productive olive oil area, Zeyton Nutraceuticals recovers the best of the Mediterranean diet: Olive Polyphenols. Founded as a technological start-up at Nova University of Lisbon, it developed to become an industrial producer, in newly built facilities.

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zeyton NUTRACEUTICALS

Parque Industrial do Penique
EN2 km 585, Odivelas
P – 7900 – 357 ODIVELAS FAL

cd.zeyton@gmail.com

olive polyphenols

Olive polyphenols are minor components of olives (2 to 3%), but exert important protective functions of the fruit content, namely the oil, as they are powerful antioxidants.

They belong to the families of tyrosol and hydroxytyrosol, substances that exist in Nature characteristically in the olive tree and in very few other plants. More than twenty years ago, it began to be realized that the healthy properties recognized in olive oil, and indeed in the famous Mediterranean diet, could owe a lot to these minor constituents of olive oil.

The interest in those substances has grown progressively, and literally many hundreds of studies have been performed on their health protection effects. Dozens of clinical trials, involving sometimes hundreds of subjects, have begun to prove those effects.

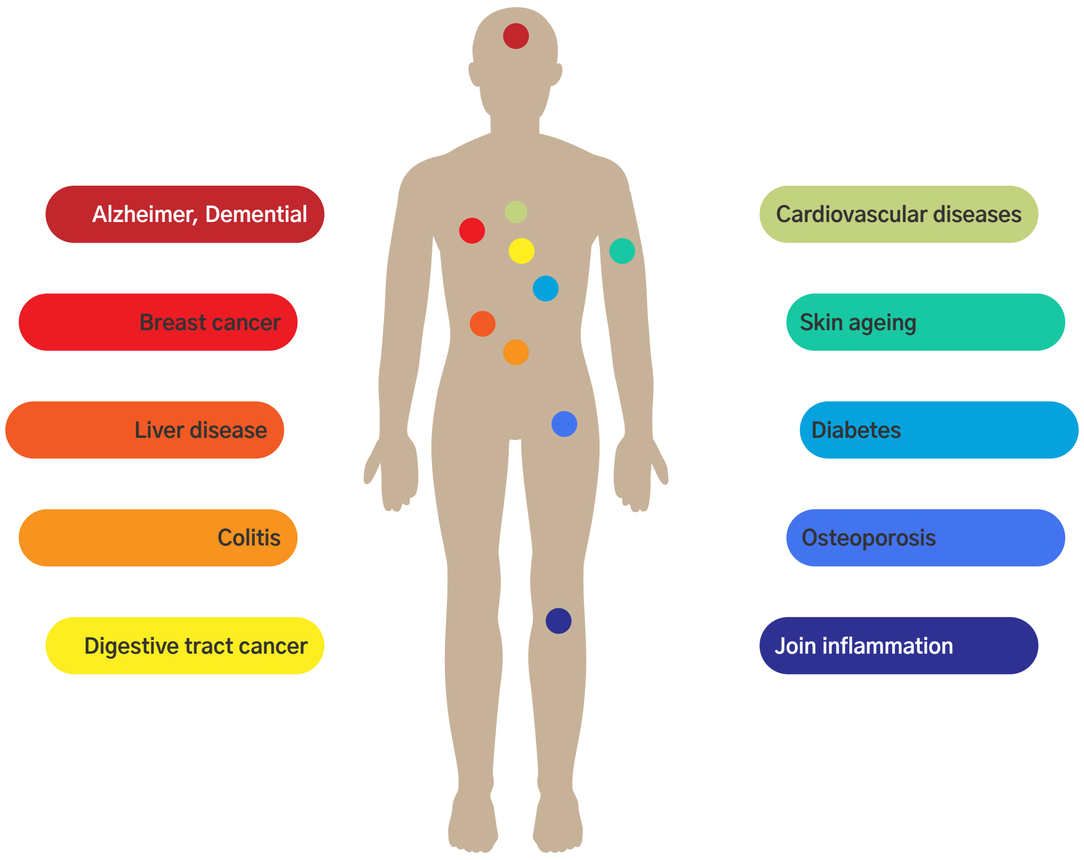
The first area where these clinical trials gave positive results was in cardiovascular health. In 2011, the European Food Safety Authority (EFSA) has recognized that there was enough hard evidence that polyphenols in olive oils contribute to the protection of blood lipids from oxidative damage (oxidative damage to blood lipids is the process that launches plaque deposition in arteries, leading to cardiovascular diseases).

In fact, the minimum quantities of olive oil polyphenols (hydrotyrosol, tyrosol and derivatives) that the EFSA considered should be taken to have a beneficial effect is positively minute – 5 mg/day. These substances are therefore powerful natural nutraceuticals even in small quantities.

Other health benefits

Olive oil polyphenols have been widely studied for promoting health. In fact, their strong antioxidant properties, and their ability to interfere in many metabolic processes are thought to give them antimicrobial, anti-inflammatory, cardioprotective, neuroprotective, anticancer, and antidiabetic effects.

Dozens of clinical trials have been launched that probe the effects of olive polyphenols, alone or combined with other nutritional substances, on a wide range of diseases. Results that are coming out of those trials give evidence that olive polyphenols may help fight obesity, metabolic syndrome, osteoporosis.



Clinical trials with olive polyphenols have addressed a large variety of diseases and conditions

HYDROXYTYROSOL

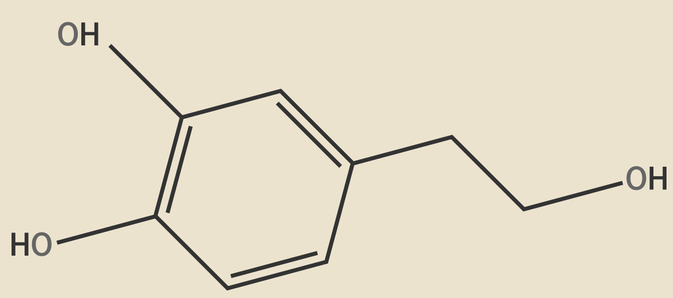
ABOUT

Hydroxytyrosol is the most powerful antioxidant known in Nature. It is produced by the olive fruit to protect its oil from oxidation.
When olives are processed to yield olive oil, only small quantities of hydroxytyrosol go with the oil. The majority is retained in the solid biomass and waters that are discarded in olive mills.

Zeyton Nutraceuticals uses these waters to obtain formulations rich in hydroxytyrosol.

Chemically, hydroxytyrosol has the name 4-(2-hydroxyethyl)-1,2-benzenediol, with the chemical formula C 8 H 10 O 3 . Hundreds of scientific publications describe its metabolic and health effects. It is regarded as having strong anti-inflammatory and anti-ageing properties.

It is truly the Mediterranean diet molecule.



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Products

ABOUT

**Zeyton specializes in the recovery of polyphenols from olive mill waters to produce wholly natural, stable products.
These can be either liquid water solutions or solid powders, with standardized content in polyphenols.**

Zeyton Nutraceuticals produces mixtures rich in olive polyphenols, either in the form of liquid water solutions or solid powders. These mixtures contain only substances present in the original olive fruit, as they are obtained by filtration of the aqueous part of olives that is separated from the oil in olive oil mills. All substances present in the agricultural environment of the olive trees, like fertilizers and pesticides, are filtered away. Moreover, the Zeyton process does not use any solvents, any chemical transformation of the raw materials, or any additives, except for maltodextrin, added to form a solid powder in the final spray-drying process.

Zeyton formulations are stable and do not change composition in normal storage conditions. Although purified olive polyphenols are chemically unstable in air and must be stored at low temperatures, Zeyton products are natural mixtures, where other naturally occurring substances stabilize the polyphenols.

Zeyton products have a standardized content in polyphenols - tyrosol + hydroxytyrosol.

Hydroxytyrosol-rich powder and capsules

Financed projects

DATASHEET XXXXXXX

Designação do projeto
Hidroxitirosol em novos produtos funcionais focados na prevenção de doenças cardiovasculares e inflamatórias

Código do projeto
C8H10O3

Objetivo principal
Reforçar a investigação, o desenvolvimento tecnológico e a inovação

Região de intervenção
Alentejo

Entidade beneficiária
ZEYTON NUTRACEUTICALS, LDA

Data da aprovação
17/08/2017

Data de início
01/07/2017

Data de conclusão
30/06/2019

Custo total elegível
339.792,82€

Apoio financeiro da União Europeia
FEDER - 263.656,22€

Apoio financeiro público nacional/regional

Objetivos, atividades e resultados esperados
O projeto compreende atividades de I&D visando o desenvolvimento de novas formulações de hidroxitirosol (HT) extraído do bagaço da azeitona, para aplicações diversas, focadas na prevenção de doenças cardiovasculares e inflamatórias.
Dos seus resultados, espera poder iniciar a produção de alimentos funcionais e nutracêuticos de comprovada eficácia na prevenção de doenças de grande impacto na sociedade moderna, contribuindo para afirmar o hidroxitirosol como uma das moléculas-chave da dieta mediterrânica.

DATASHEET XXXXXXX

Unidade do projeto
Unidade Zeyton

Código do projeto
ALT20-01-0853-FEDER-046299

Objetivo principal
Reforçar a competitividade das PME

Região de intervenção
Alentejo

Entidade beneficiária
ZEYTON NUTRACEUTICALS, LDA

Data da aprovação
31/12/2019

Data de início
31/12/2019

Data de conclusão
15/12/2020

Custo total elegível
249.914,00€

Apoio financeiro da União Europeia
FEDER - 162.444,10€

Apoio financeiro público nacional/regional

Objetivos, atividades e resultados esperados
Este projeto destina-se à construção de um novo estabelecimento industrial para produzir, usando tecnologias limpas, várias matrizes ricas em HT, com o objetivo de prevenir doenças cardiovasculares. Os resultados esperados, compreendem a comercialização das formulações Zeyton.

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Process

ABOUT

Zeyton's process is a very efficient sequence of operations to separate olive polyphenols from the semi-solid cake that results from olive oil production.

It is a totally clean process. It uses no synthetic chemistry. It does not use extraction with solvents, or other additives. It uses filtration with special membranes. These (nano)filtration membranes selectively let hydroxytyrosol and tyrosol pass through and retain most other cake components, including all deleterious substances that might have been absorbed from the environment or added by agricultural practices. The obtained product is therefore totally safe and natural.

Zeyton's process simplicity is one of its main advantages, as a one-step filtration yields a highly purified aqueous solution of hydroxytyrosol and tyrosol. This solution is concentrated by reverse osmosis, a standard process commonly used to produce fresh water.

The resulting product, highly concentrated in olive polyphenols, may be further concentrated by low-temperature evaporation, or dried, to generate a powder.

This process has been granted patents in the USA, Europe, North Africa, Brazil, Canada.

Nanofiltration and low-temperature evaporation

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About us

Zeyton Nutraceuticals began as a technological start-up in a university environment – Nova University Lisbon (www.fct.unl.pt) and IBET (www.ibet.pt). It became an industrial producer, with newly built industrial facilities located in the South of Portugal, right at the heart of an olive oil-producing area.

Using patented green technology, Zeyton specializes in the recovery of **olive polyphenols** from olive mill waters to produce wholly natural, stable products. The production process is purely physical, generating a wholly natural product:
- no solvents;
- no additives;
- no synthetic chemistry.

Zeyton production facilities are on the premises of a high-volume olive pomace collector, and therefore its access to natural raw material is unlimited.
The team is constantly searching for potential improvements in process optimization, product quality, new formulations, and applications. Patents were granted in the USA, Europe, Canada, Brazil, and North Africa.

OUR MISSION

Zeyton's mission is to promote the use of olive polyphenols, and namely hydroxytyrosol, for disease prevention and healthy living.

OUR GOAL

Zeyton Nutraceuticals develops innovative and environmentally friendly technologies to produce wholly natural polyphenol-rich concentrates from high-quality south Portuguese olives. It focuses on obtaining products tailored to applications in food, nutraceuticals, and cosmetics.

Zeyton aims at providing high-quality products that can be adapted to the needs of each customer, using the know-how of its highly qualified team and its extensive network of R&D partners.

Facilities

Zeyton production site

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News

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21/04/2022 – Nome Apelido

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21/04/2022 – Nome Apelido

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