

EXOPOLYSACCHARIDE 15 – Plankton Extract

Related ingredient: *EPIDERMIST 4.0*

EXOPOLYSACCHARIDE 15 is a solution of a unique, pure and natural ExoPolySaccharide (EPS) produced by marine plankton.

EPS 15 is essentially comprised of galactose and N-acetyl glucosamine, and has a high molecular weight: >1.4 millions dalton.

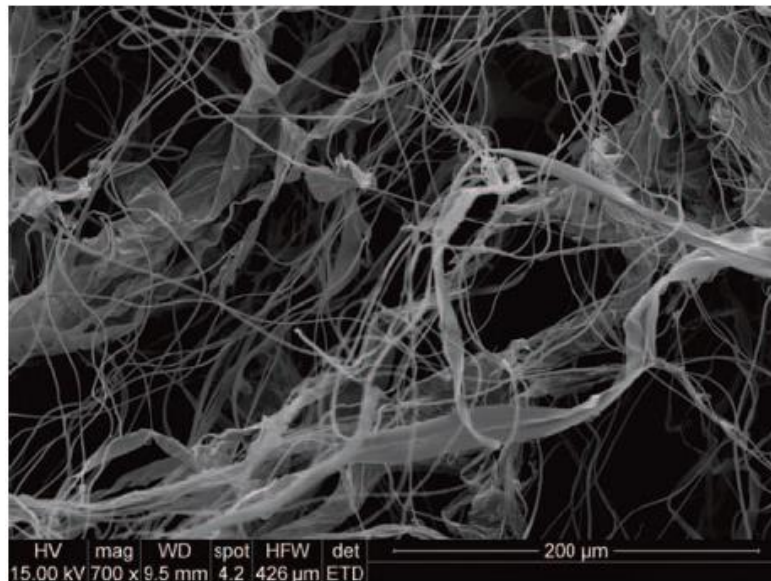


DEFINITION OF AN EXOPOLYSACCHARIDE

ExoPolySaccharides, also called EPS, are high molecular weight polymers mainly composed of sugars. They are produced and secreted by micro-organisms directly into their environment to provide protection, nutrition or adhesion.

Each micro-organism produces its own specific Exopolysaccharide with its own unique sequence of sugars. The Marine Exopolysaccharides like **EPS 15** have no land based equivalent and represent a new and original source of molecule.

Due to its unique composition, each Exopolysaccharide possesses unrivalled surface, texture and cellular activation properties.



View of a Marine Exopolysaccharide under a scanning electron microscope

THE ENVIRONMENT FROM WHICH EXOPOLYSACCHARIDE 15 IS DERIVED: ABER BENOÎT

EXOPOLYSACCHARIDE 15 is produced from a plankton micro-organism isolated from the Aber-Benoît.

An *Aber* (a Celtic word meaning an estuary) or a *ria* (a Galician word) is a river valley which has been invaded by the sea. Geographers internationally use the word *ria* but the Breton word *aber* is also used.

Abers provide a rich and varied ecosystem in which organisms and micro-organisms develop in sea water and fresh water simultaneously.

The **Aber-Benoît** is a coastal river of the Pays de Léon region in north east Finistère, Brittany (North West France).



Etymology

The name Aber Benoît arose from a mistranslation of the Breton *Aber beniguet* or *Aber beni* ("Holy Harbour"). This name in turn stems from the establishment in the 6th century of two oratories, one on each side of the aber, by Tudgibus and his son Majan at Lothunou and Loc Majan. Another theory says the name comes from *Aber Benouhir* (or *Ban de Benoïc*) ("Harbour of Bénouhir"), from the name of the Breton chieftain who fathered Lancelot of the Lake.

The fluvial section

The Aber-Benoît is between the Aber-Wrac'h and the Aber-Ildut. The river starts at an altitude of 330 feet to the north of Brest harbour and flows for 19 miles to the north west towards Mer d'Iroise, separating Upper Léon (on the right bank, to the east) from Lower Léon (left bank, to the west). The fluvial section is a modest coastal river about 2 metres wide.

The maritime section

From where it joins the stream of Bourg-Blanc, the largest section of the Aber-Benoît is an aber which forms a harbour area. A number of small ports have been established here. The Aber-Benoît flows out into the Mer d'Iroise into a gulf scattered with many islands.

The area is very favourable for oyster farming due to the high level of food plankton in the waters.



Source : www.west-ulum.com

PRODUCTION OF THE EXOPOLYSACCHARIDE 15

EXOPOLYSACCHARIDE 15 is produced from a planktonic micro-organism. Isolated and qualified, this micro-organism is cultivated in bioreactor in which it secretes its exopolysaccharide directly in the culture medium.

Then we use sophisticated purification systems to obtain a high purification degree of EPS 15.

Guaranties of the production process

- Synthesis totally controlled
- Reproducibility of the chemical structure
- High purity of the molecule

This process allows the manufacture of PURE and 100% NATURAL molecules.



Picture of a bioreactor used to cultivate the micro-organism which produces EPIDERMIST 4.0