

KEM LD

Laminaria Digitata - Green Color Seaweed

Dry seaweed is a natural colloidal organic material. It influences the physical, chemical, and biological properties of the substratum.

Seaweed extracts are well-known bio-stimulants. They are characterized by high efficiency in plant cultivation and are environmentally friendly due to the biological origin of the material. Therefore, algal extracts can constitute an alternative to synthetic plant stimulants and support traditional fertilizers. The use of extracts from marine algae gives an opportunity to choose any method of application suitable for a particular plant and its expected effects. Laminaria Digitata is a dark brown alga with a smooth, flexible stipe and can reach 3 to 4 m in length. *L. digitata* can grow to be 4 to 5 years old. Fixed with a root-like holdfast, this kelp grows on rocky bottoms in the upper subtidal zone in sheltered to moderately exposed areas from 1 to 25 m in depth. Our source of Laminaria digitata is currently obtained from unexploited kelp beds in parts of Brittany and Normandy. Our location on the Iroise sea gives us the best selection of harvesting location, meaning the raw materials we use are top-choice.

The coasts of Brittany are subjected to extreme weather conditions such as climate changes, storms, currents and the highest tides in Europe. To fight the stress of such harsh conditions, seaweed creates natural defense mechanisms that give it exceptional properties and a wealth of biochemical compounds such as polysaccharides, proteins, minerals, vitamins, trace elements and phenolic compounds.

Composition and Mode of action

L. digitata extract KEM LD is rich source of organic matter which constitute almost 78% of extract, 16% Minerals. Alginic acid is major component of organic matter and constitutes almost 27%, followed by Laminarine (14%), and raw proteins (12%), Fucoidine (6%), Cellulosic matter (7-8%) and trace micronutrients.

Alginic acid triggers the growth of beneficial soil microbes and the secretion of soil- conditioning substances by these microbes. It also affects soil properties and encourages the growth of beneficial fungi [VAM or arbuscular mycorrhizal (AM)]. The presence of alginic acid improves soil texture by improving its crumb stability and its water-holding power. It is suggested that alginate confers hydrophilic properties on the soil by its combination as an ion with one or more constituents of the soil particles, thereby presenting new surfaces with high water-holding powers. It helps to reduce stress under a limited water supply.