

SM3 Data Sheet

Seaweed concentrate (15% w/v)
Certificated organic by Soil Association
Alginic acid > 2.7%
Mannitol > 1.0%

SM3 is a concentrated seaweed extract derived from the *Ascophyllum nodosum* species of seaweed. It contains a range of naturally occurring bioactive compounds that support plant health, growth and development, while helping plants cope with environmental stresses such as moisture stress, pest and disease pressure and mild frost. The main components and their activities are summarised below.

Alginic Acid

As the main structural carbohydrate of *Ascophyllum*, this polymer will be liberated from the cell wall of the algae into water-soluble form during the extraction process. These polymeric acids carry bonded sulphur and are strong micronutrient chelators and can help with nutrient availability/delivery.

Fucoidan / Laminarin

Fucoidan and Laminarin are polymeric sugars and are well documented in plant immune stimulation processes.

Oligosaccharides

A large percentage of the organic matter fraction of *Ascophyllum* extracts is comprised of various poly- and oligosaccharides. They are recognised as elicitors and stimulators of plant defense mechanisms.





Mannitol

Comprising up to 2% of the dry weight of *Ascophyllum*, mannitol is a sugar-alcohol that has been widely shown to be an osmotic regulator in plants. Mannitol can act to protect and adjust cell-water status in abiotic stress and water-related stress issues. It is also involved in inorganic nutrient chelation and can act to improve nutrient availability similar to alginic acid.

Micronutrients

Many micronutrients including iron, zinc, boron and manganese are present in *Ascophyllum*. They may be present in organically chelated forms, making them more available to plants.

Macronutrients

Macronutrients and secondary macronutrients such as potassium, calcium, magnesium and sulphur are also present in our seaweed extracts. Seaweed extracts can be considered as a "soup" containing many compounds which act individually or in combination to help crops attain their maximum potential.





Aqueous extract of seaweed containing no less than 15% w/v soluble seaweed solids

SM3 is an organic product with no added nutrients, it is not possible to quote a guaranteed analysis. However, a "typical" analysis is as follows:

Bioactive Components

Organic Matter	>9%
Soluble Seaweed Solids	>15%
Alginic Acid	2.7-5%
Mannitol	1-2.5%
Fucoidans	2-3%
Laminarins	-3%

Elemental Analysis

Nitrogen	0.1-0.3%
Phosphorus	0.03%-0.16%
Potassium	0.3-1.0%
Sulphur	1.6%
Calcium	0.8%
Magnesium	0.25%
Manganese	8 ppm
Iron	25 ppm
Copper	1 ppm
Zinc	3 ppm



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