

## *Ascophyllum nodosum* KELP MEAL AND FLOUR

**ASCOPHYLLUM NODOSUM** seaweed, commonly known as Norwegian Kelp, Common wrack or Rockweed, is a brown seaweed which grows along the North Atlantic shorelines of Canada and Europe. Acadian Seaplants harvests the seaweed off the cold, clean coast of Nova Scotia, Canada using environmentally sound hand harvesting techniques to safeguard the natural resource and to ensure only *Ascophyllum nodosum* is harvested. The company's rigorous quality control standards and passive solar drying techniques preserve the maximum benefits of the live seaweed. As this is a 100% natural product, the typical analysis below may vary due to variations in the seaweed.

### TYPICAL ANALYSIS: (Approximate %)

Moisture	13.0%
Crude Protein	6.0%
Crude Fiber	6.0%
Ash (Minerals)	22.0%
Fat	3.0%
Carbohydrates	50.0%
<b>Total</b>	<b>100.0%</b>

### MINERALS:

Aluminum (Al)	50 - 150 ppm
Barium (Ba)	5 - 15 ppm
Beryllium (Be)	<1 ppm
Boron (B)	80 - 100 ppm
Cadmium (Cd)	<1 ppm
Calcium (Ca)	1.0 - 3.0%
Chloride (Cl)	1.0 - 3.0%
Chromium (Cr)	1 - 2 ppm
Cobalt (Co)	<1 ppm
Copper (Cu)	1 - 10 ppm
Iodine (I)	<1000 ppm
Iron (Fe)	100 - 500 ppm
Lead (Pb)	<1 ppm
Magnesium (Mg)	0.5 - 1.0%
Manganese (Mn)	10 - 50 ppm
Mercury (Hg)	<1 ppm
Molybdenum (Mo)	<2 ppm
Nickel (Ni)	<1 ppm
Nitrogen (N)	0.5 - 2.0%
Phosphorus (P)	0.1 - 0.2%
Potassium (K)	1.5 - 2.5%
Selenium (Se)	3 - 4 ppm
Sodium (Na)	2.4 - 4.0%
Strontium (Sr)	100 - 600 ppm
Sulfur (S)	2.0 - 3.0%
Tin (Sn)	<10 ppm
Titanium (Ti)	1 - 10 ppm
Vanadium (V)	2 - 6 ppm
Zinc (Zn)	10 - 50 ppm

### CARBOHYDRATES:

Alginic Acid	18.0 - 27.0%
Mannitol	3.0 - 8.0%
Laminarin	2.0 - 5.0%
Other Sugars	20.0 - 22.0%

### VITAMINS:

Biotin	0.1 - 0.4 ppm
Carotene	30 - 60 ppm
Folic Acid	0.1 - 0.5 ppm
Niacin	10 - 30 ppm
Riboflavin	5 - 10 ppm
Thiamin	1 - 5 ppm
Tocopherols	150 - 300 ppm
Vitamin C	100-2000 ppm
Vitamin B <sub>12</sub>	<0.004 ppm
Vitamin K	<10 ppm

### AMINO ACID CONTENT:

Alanine	0.34%
Arginine	0.22%
Aspartic Acid	0.53%
Cystine	0.07%
Glutamic Acid	0.71%
Glycine	0.30%
Histidine	0.07%
Isoleucine	0.26%
Leucine	0.38%
Lysine	0.30%
Methionine	0.11%
Phenylalanine	0.24%
Proline	0.25%
Serine	0.27%
Threonine	0.25%
Tryosine	0.12%
Tryptophan	0.06%
Valine	0.27%