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SINGLE DOCUMENT

‘Oriel Sea Minerals’

EC No: [for EU use only]

PDO (X) PGI ( )

1. NAME

‘Oriel Sea Minerals’

2. MEMBER STATE

Ireland

3. DESCRIPTION OF THE AGRICULTURAL PRODUCT OR FOODSTUFF

3.1 Type of product

Class 2.6. Salt

3.2 Description of product to which the name in (1) applies

‘Oriel Sea Minerals’ is the name given to concentrated sea mineral salts in liquid form harvested from the bay of Port Oriel, Clogherhead, Drogheda, County Louth, Ireland. It is a concentrated blend of Macro and Trace Minerals that is a clear (sometimes slightly yellow in colour dependent on the time of year harvested) and slightly viscous liquid form. It is additive free. It has an oily feel and texture to the touch yet there are no oils present. The viscosity of the sea minerals is 4.61 mPa.s at Temp of 25 degrees & Spindle Speed of 50 rpm (+ - 5 %). Its concentrated liquid form allows it to be diluted in most beverages, juices or plain water at a ratio of between 100-1 and 1000-1 dependent on the need.

Due to its liquid form the Macro Minerals and Trace Minerals are in an Elemental state (that is before they are bound by any Ligands such as sulphate, citrate, oxide etc). The Patented system employed allows Oriel to harvest/mine the ocean waters for these minerals and to concentrate them to this level. This is the only facility in Europe designed to extract and harvest Macro and Trace Minerals in their Elemental state at such a high concentration and density. The pure liquid state when diluted is rapidly absorbed into the body as the body does not have to first break down the ligands (ligands are typically used as the carriers of minerals and must be broken down before the body can receive the benefit of the minerals).

The minerals when taken in their concentrated state have a powerful mineral taste however when diluted in water, juice or other beverage the minerals completely dissipate leaving almost no aftertaste. When just a few drops are put into water, the water softens as it is “Mineralized” The concentration level and density is achieved through harvesting in a closed pressurised system prior to final concentration. ‘Oriel Sea Minerals’ are an excellent Food Supplement delivering a perfect balance and ratio of Macro and Trace Minerals to the body through the medium of water or liquid making absorption and results more rapid and effective.

‘Oriel Sea Minerals’ is in its most natural and pure state as a concentrated liquid. This also ensures a more consistent and measureable presence of natural Macro minerals such as Magnesium, Potassium, Sodium and Chloride and up to 65 Trace Minerals such as

Copper, Zinc, Boron, Berylium etc.

Certificate of Analysis for 'Oriel Sea Minerals', tested by Fitz Scientific (an accredited & certified laboratory). 'Oriel Sea Minerals' is within +/- 10% of the table below.

Oriel Sea Minerals Analysis Testing: ICP MS		**Oriel Sea Minerals**
		ml / ltr
H2O	**Water**	**Less than 58% by weight**
Mg	**Magnesium**	**Less than 70,000 ml / ltr**
Na	**Sodium**	**Less than 28,000 ml / ltr**
K	**Potassium**	**Less than 24,000 ml / ltr**
B	**Boron**	**Less than 220 ml / ltr**
Ca	**Calcium**	**Less than 78 ml / ltr**
Ni	**Nickel**	**Less than 2.5 ml / ltr**
Cu	**Copper**	**Less than 1.75 ml / ltr**
Sr	**Strontium**	**Less than 1.3 ml / ltr**
Pb	**Molybdenum**	**Less than 0.53 ml / ltr**
Fe	**Iron**	**Less than 0.53 ml / ltr**
Zn	**Zinc**	**Less than 0.50 ml / ltr**
Al	**Aluminium**	**Less than 0.50 ml / ltr**
Mn	**Manganese**	**Less than 0.23 ml / ltr**
Cd	**Cadmium**	**Trace**
Cr	**Chromium**	**Trace**
Se	**Selenium**	**Trace**
Pb	**Lead**	**Trace**
Co	**Cobalt**	**Trace**
Hg	**Mercury**	**Trace**
Tl	**Thallium**	**Trace**
Be	**Beryllium**	**Trace**

3.3. Feed (for products of animal origin only) and raw materials (for processed products only)

Sea Minerals naturally harvested from the Irish Sea.

3.4. Specific steps in production that must take place in teh identified geographical area

Production & Process Steps:

All processes of harvesting, evaporation, separation and crystallization are performed in the designated area, under controlled and monitored conditions to ensure consistency in the end products. This includes:

- Pumping and filtration of sea water through custom designed and built filter system.
- Removal of majority of Sea Salt following concentration of brine in a closed pressurised system. (Proprietary process).
- Concentration of sea minerals in a secondary high pressure system. (Proprietary process).
- Harvesting of concentrated sea minerals through a proprietary process.

3.5. Specific rules concerning slicing, grating, packaging, etc. Of the product the registered name refers to

Not Applicable

3.6. Specific rules concerning labelling of the product the registered name refers to

Not Applicable

4.0. Concise definition of the geographical area

Port Oriel, Clogherhead is located on a headland that protrudes out into deep water straits for almost 7 miles and is situated just above the River Boyne.

5.0. Link with the geographical area

The qualities of 'Oriel Sea Minerals' are essentially due to the raw materials, the unusual deep sea currents in the geographical location, due to the Gulf Stream, and the process employed where it is untouched by air, earth or human until it emerges prior to being subjected to a secondary proprietary process.

***Sea Water*:**

Port Oriel is situated on a headland that protrudes directly out into deep water straits for almost 7 miles. In tests, the salinity in these waters is comparable to that normally only found in deep sea water. This high salinity has been linked with the unusual deep sea currents of the Gulf Stream in the area. The water at Port Oriel has been consistently tested at a density 3.5 % – 3.6% which is consistent with deeper waters.

The Gulf Stream flows up the west coast of Ireland and when it meets the cooler waters of the Norwegian Sea it wraps around the North and North Eastern headland to its final destination, five miles beyond the Bay at Port Oriel. At this point the current ends as it meets the massive outflow of the River Boyne (Ireland's second largest river).

The waters of Port Oriel have consistently been rated as Grade "A" International Shellfish Quality, the purest of the sea, for many years by The Marine Institute of Ireland. The harvesting of mussels, clams, crab, lobsters and razor fish is a vibrant business in and around the bay of Port Oriel and this vibrancy of shellfish also contributes to the high quality and mineral content of the water.

Process Employed:

Oriel Sea Mineral Salts are extracted, harvested and concentrated through a Patented process, purpose designed to break down Sea Water to its raw components and to extract each of these components as salts in their solid or liquid mineral state. It is the only process of its kind in Europe and globally, located in a carefully selected area with waters of the highest quality as its source raw material.

Region and History:

Harvesting of mineral sea salts in this region dates back centuries. The following is from the County Louth Archaelogical & Historical Journal. *"On 28th January 1667 Viscount Dungannon leased a parcel of land lying neere ye towne of Carlingforde for erection of saltworks to Colonel Cooke of Chiswick in Middlesex as a salt manufacturer"*. For hundreds of years Port Oriel has been synonymous with abundant fishing waters with locals fishing deep-water fish directly from the

rocks & harbour. Salt was a vital ingredient in preserving fish landed at the harbour for consumption, storage and subsequent transport to market. {pt mp 16 pm near Newry Street on the 1797 map had a salt works on it, with local documented facts detailing the salt/sluice gates also recorded}.

Summary:

The sea salt produced is characteristic of its origin with a direct relationship to the salinity, quality and density of the minerals in the water. This is reflected in the high mineral content of 'Oriel Sea Minerals'.