

# WHAT IS IN BLM

3-in-1 supplementation combination



## 3 in 1 FORMULATION

All Beachport Liquid Minerals products are made up of a unique chelated blend including the well documented nutritional values of kelps and sea grasses (naturally sourced amino acids). They all include Fulvic acid (a natural electrolyte) which makes the blend bio-active and bio-available. Each BLM product also includes varying amounts of chelated major and trace elements suitable for improving the health and productivity of your livestock.

## KELP / SEAGRASS

Kelp/Seagrass extract is high in 16 naturally occurring amino acids, also major and minor trace elements in natural form.

## AMINO ACIDS

Amino Acids are the building blocks of protein for utilisation of both dry and green feed.

BLM contains the 10 essential amino acids:

1. **Leucine:** tissue repair, muscle mass, stress, growth, protein synthesis, bone, coat and blood haemoglobin.
2. **Isoleucine:** nervous system, energy, muscle, endurance and blood haemoglobin.
3. **Valine:** nervous system & glycogen production.
4. **Lysine:** helps the body absorb and conserve calcium, muscle development and immune system.
5. **Methionine:** is a sulphur producing amino acid, promotes estrogen production and growth.
6. **Phenylalanine:** nervous system (stimulates endorphin)
7. **Threonine:** protein balance, immune system, nervous system, stress, bones and coat.
8. **Tryptophan:** stress.
9. **Histidine:** powerful nutrient, growth and blood health.
10. **Arginine:** essential for nutrition.

### Non-essential amino acids:

11. **Alanine:** glucose-alanine cycle and urea cycle.
12. **Aspartic Acid:** is a metabolite in the urea cycle.
13. **Cystein:** has antioxidant properties and essential for young stock.
14. **Glutamic acid:** involved in cellular metabolism, breaks down dietary proteins into amino acids.
15. **Glycine:** is considered a glycolytic acid, which means it helps supply the body with glucose needed for energy.
16. **Tyrosine:** to synthesize proteins.

The BLM system of incorporating these amino acids with the absorption and retention qualities of fulvic acid is the key to how this product minimizes the dependency on urea in lick and blocks.

## FULVIC ACID

Fulvic acid is one of nature's most powerful natural electrolytes. It stimulates the rumen, has the ability to bond and dissolve minerals and nutritional elements and is capable of carrying 60 or more minerals and trace elements into cells.

*"Fulvic acid is extracted from a plant derived natural process and is an exclusively Australian processed product which is certified Organic by NASAA. The Fulvic acids are extracted using a unique process to maintain the integrity, stability and most importantly biology of the end product.*

*There has been sufficient research completed throughout the world to prove that Fulvic acids have the ability to increase the absorption and retention of minerals and nutrients, both within plants and animals.*

*The properties of Fulvic acid, which enable it to achieve the best results as animal supplements are:*

- *They are strong natural electrolytes and hence have high chelating and cation exchanging properties. This enables the Fulvic acid to bind to the nutrients, enhancing the availability and absorption of nutrients within the animal rumen.*
- *The low molecular weight and bio-transporting ability of Fulvic helps to carry the held nutrients into the living cells. Once the nutrients blend into the Fulvic acid complex, they become bio-active and bio-available.*
- *Fulvic acid, because of its electrolytic properties, helps to restore the electrical balance that has been disturbed during stress periods."*

- Varsha Pushpakaran (B.Sc.)

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## CHELATED ELEMENTS

The following elements are included in the BLM products and play an immense role in the health of your livestock. Levels will vary depending on the BLM product and its use but keep in mind levels are sufficient for this type of supplement due to the increased absorption and retention ability due to the qualities of fulvic acid and kelp/ seagrass extract in all BLM products.

## MAJOR ELEMENTS

Major Elements are essential minerals that the body requires larger amounts of.

**PHOSPHORUS:** has key functions in metabolic pathways and physiological functions; such as...

- Development and maintenance of skeletal tissue (bone and joint health)
- Energy utilization and transfer
- Protein synthesis, transport of fatty acids, and amino acid exchange
- Growth and cell differentiation
- Appetite control, efficiency of feed utilization and fertility

**MAGNESIUM:** is linked closely to Calcium and Phosphorus. 70% of Magnesium is found in the skeleton and the remainder is utilized in soft tissues and fluids. Magnesium plays a vital role in cellular respiration, cellular biochemistry and function, active transport system and the nervous system (improves temperament). Also helps with prevention against grass tetany (Hypomagnesaemia) and milk fever.

**POTASSIUM:** works alongside Sodium, Chlorine and Bicarbonate ions in Osmotic regulation. It has an important role in the nervous system, muscle functions and carbohydrate metabolism.

**SULPHUR:** assists in Microbial digestion and protein synthesis as Sulphur occurs in proteins which contain the amino acids Cystine, Cysteine and Methionine.

## TRACE ELEMENTS

Trace Elements are essential minerals which are important to daily functions but are only required in small amounts.

**COPPER:** is a component in proteins involved in blood which helps with blood health and growth of the animal.

**COBALT:** required by the microorganism in the rumen for the synthesis of B12; also functions as an activating ion in enzyme reactions.

**IODINE:** very small amount is present in the body. Iodine is required in the synthesis of the hormones produced by the Thyroid gland. From the synthesis of the hormones produced by the thyroid gland, Iodine also plays a role in fertility, immune defence, digestion and muscle function.

**MANGANESE:** is important as it acts as an activator of enzymes. It has been found it helps with growth, skeletal development, fertility and reproduction. One of the first signs of deficiency is abnormalities in young calves and lambs, also in decreased conception rates.

**ZINC:** is found in every tissue in the animal's body. Important to animals as it aids in skin, wool, hair, hoof health & wound healing. Zinc is also involved in nucleic acid metabolism as well as the immune system and electrolyte balance.

**SELENIUM:** involved with Vitamin E in the immune system to protect against heavy metal toxicity. Selenium also assists in the production of the thyroid hormone, muscle development (white muscle disease), milk production, blood health and tissue health of young animals.

