



“Micro Minerals is a solution of trace elements without copper in a convenient liquid form for fast absorption”.



Biological Therapies

Bio-Logical Micro Minerals Solution

ORAL LIQUID



Biological Therapies

www.biologalththerapies.com

Suite 5, 20-30 Malcolm Road, Braeside VIC 3195

PO Box 702, Braeside VIC 3195

Tel +61 3 9587 3948 • Fax +61 3 9587 1720 • biol@biol.com.au

ABN: 99 006 897 856



Aust L 99874



Description:

Bio-Logical Micro Minerals Solution contains Zinc, Boron, Manganese, Molybdenum, Selenium, Chromium and Iodine in a convenient clear liquid form.

These highly soluble forms of trace elements are packaged in a tamper proof bottle together with a graduated dropper for ease of measurement.

Composition:

Each adult dose (**1mL**) of Bio-Logical Micro Minerals Solution contains:

- Zinc 5mg (as Zinc sulfate)
- Boron 2.9mg (as Boric acid)
- Manganese 2.5mg (as Manganese sulfate monohydrate)
- Molybdenum 125 mcg (as Molybdenum trioxide)
- Selenium 52 mcg (as Sodium selenite)
- Chromium 50 mcg (as Chromic chloride)
- Iodine 50 mcg (as Potassium iodide)

Indications:

Bio-Logical Micro Minerals Solution may be used to treat a deficiency of any of the active ingredients. Deficiencies may exist due to poor dietary supply, poor absorption or increased utilisation/clearance from the body. This formulation does not contain copper or any added flavouring agent, so is particularly suited to people sensitive to flavourings or in areas with a high copper level in the environment.

Discussion:

Zinc, Manganese, Molybdenum, Selenium and Chromium are typically bound as cofactors inside enzymes or metalloproteins. Iodine is incorporated into the thyroid hormones T3 and T4 and is essential for normal energy metabolism, development and growth, including of the brain. The Medical Journal of Australia has reported in one study that 76% (439/577) of school children had abnormal urinary iodine values, with 27% (156/577) having values consistent with moderate-severe deficiency. This potentially places our young children at risk of stunted growth and reduced IQ's. Boron deficiency is known to affect calcium metabolism which includes bone development and maintenance, brain function and energy metabolism. Arthritis has been associated with boron deficiency. Zinc and Molybdenum deficiencies are known to exist in Australian soils.

Zinc is required by many enzymes and is a component of bio-membranes. Zinc is essential for growth, tissue repair and immune function. Selenium is essential in the glutathione peroxidase enzymes which control harmful peroxides and oxidant molecules.

Manganese is a cofactor in many enzyme systems, including a manganese dependent superoxide dismutase and the connective tissue glucuronosyl transferase – deficiencies of which can lead to arthritis. Low manganese levels have also been associated with poor wound healing. Molybdenum is a cofactor in various hydroxylation enzymes and enzymes that detoxify pyrimidines, purines, pteridines and related compounds. Molybdenum is required for the production of uric acid. Chromium is essential for the efficient action of insulin.

Product Warning:

Chromium supplementation may enhance the effects of insulin therapy or oral hypoglycaemic drug therapy.

Selenium containing products are not suitable for use by children under the age of 15 years.

Dosage:

Adult dosage: Using a dropper, take 1mL daily in a glass of water or juice, or as directed by your practitioner.

References:

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- McDonnell CM, Harris M, Zacharin MR. Iodine deficiency and goitre in schoolchildren in Melbourne, 2001. Med J Aust. 2003 Feb 17;178(4):159-162.
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