

MCH-Cal™

microcrystalline hydroxyapatite calcium



TOTAL BONE NUTRITION

Waitaki Biosciences MCH-Cal is a totally natural, microcrystalline hydroxyapatite complex that supports optimal bone mineral composition and overall bone health.

MCH-Cal™ FEATURES

Produced exclusively to our proprietary process, using 100% New Zealand sourced raw materials, MCH-Cal is a bone derived, nutraceutical ingredient, delivering all the elements present in healthy bone tissue.

What's more, the gentle, proprietary, manufacturing process preserves the naturally occurring bioactives in MCH-Cal and ensures they are present in the correct physiological ratios. This makes MCH-Cal one of the most complete and effective bone health ingredients available today.

- Contains bioactive **growth factors**. These small peptides found in the protein fraction of MCH-Cal play an important role in bone remodeling by stimulating osteoblast formation and activity.
- **Microcrystalline structure**. MCH-Cal contains a minimum of **24% calcium** and **10% phosphorous** in a microcrystalline structure for improved absorption and bioavailability.
- Minimum of **22% bone protein**, including up to 20% type I collagen and growth factors to enhance absorption and promote bone formation.
- Contains a range of **trace minerals** as well as **glycosaminoglycans** found naturally in healthy bone matrix.
- Independent testing verifies low levels of lead, making Waitaki's MCH-Cal compliant with stringent Californian Proposition 65 requirements.

MCH-Cal™ PRODUCT PROFILE

Physical Form

Fine free flowing powder
Particle size: <850 micron, <250 micron and <150 micron
Colour: white
Shelf life: 3 years
Packaging: 25 kg net weight cartons

Functionality

Dietary supplement providing calcium to help meet daily nutritional requirements / Premium bone health nutraceutical ingredient with proven ability to improve bone mineral density and minimise bone loss / Effective adjuvant therapy to hormone replacement / Recommended dose: 2000 – 3000 mg per day

Applications

Waitaki's MCH-Cal can be utilised in a number of different delivery systems, including capsules, tablets, sachets, and liquid suspensions for the nutraceutical market. It is also suitable as a component in companion animal supplements.



MCH-Cal™ MANUFACTURE

Waitaki Biosciences MCH-Cal is manufactured only from safe, natural raw material sources - New Zealand free range, pasture fed and BSE free cattle. All animals have passed ante and post mortem veterinarian inspection at the time of processing.

Conversion of the raw material occurs at Waitaki's purpose built and fully export licensed factory in Christchurch, New Zealand.

MCH-Cal™ RESEARCH

Published scientific research on whole bone microcrystalline hydroxyapatite (MCHA), demonstrates its effectiveness at slowing loss of bone mineral density in post menopausal women, improving symptoms of bone pain in those with osteoporosis and slowing the progression of osteoporosis. Research has also shown that it works well as a complementary therapy to drug treatments such as raloxifene and estradiol. *(Pelayo 2008, Castelo-Branco 1999, Pines 1984)*

Supplementing with whole bone MCHA was found to be more effective at improving loss of bone mineral density than the equivalent dose of calcium carbonate or calcium gluconate in several studies. *(Rueggsegger 1995, Annefeld 1986, Epstein 1982)*

It is important to note that this research does not apply to bone meal products, or synthetic hydroxyapatites, where the protein is either totally absent, or largely destroyed by excessive heat or other harsh treatments.

Waitaki's own independent research includes an animal model of post menopausal bone loss. Using this model, daily supplementation with MCH-Cal over a six month period was shown to reduce loss of bone mineral density compared to control animals receiving a standard diet. Bone density measurements improved across lumbar spine and femur bone sites in ovariectomised rats. Improvements were seen at both 13 and 26 week assessments by DEXA scanning.

