

# MULTIMIN<sup>®</sup>

## Injection for Cattle



Chelated trace mineral injection for beef and dairy cattle deficient in and/or responsive to manganese, zinc, selenium and/or copper supplementation.



### WHAT IS MULTIMIN?

- ✓ Injectable source of zinc, manganese, copper and selenium – significantly increases the trace mineral status of cattle
- ✓ Ideal for “topping up” trace minerals prior to critical times when demand may increase or availability reduced
- ✓ Sodium EDTA chelate ensures excellent absorption and utilisation
- ✓ Unique patented aqueous injection

### WHY CHOOSE MULTIMIN?

#### 1. Ideal for strategic management

MULTIMIN contains the four most essential trace minerals for reproduction, immunity and growth in a balanced formulation. The concept is to “top up” essential trace mineral levels prior to critical events such as calving and joining.

#### 2. Highly bioavailable

MULTIMIN has been formulated to deliver a balanced ratio of zinc, manganese, copper and selenium that bypasses the rumen for direct uptake through the blood.

#### 3. Aqueous formulation

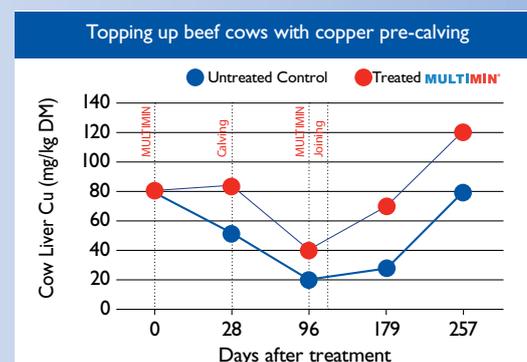
An aqueous formulation minimises injection site pain and reactions that are sometimes associated with other trace mineral injections.

### WHY TOP-UP TRACE MINERALS?

The focus of trace mineral supplementation has developed to beyond correcting deficiency symptoms; rather strategic mineral supplementation is aimed at the optimisation of reproductive performance, immune function and growth. The optimisation of particular trace minerals and the correction of sub-clinical deficiency can result in significant improvements in productivity and subsequently profitability.

#### 1. Mineral shortages during critical events

The absorption of essential microminerals from feed or feed supplements is often not sufficient when the demand for these minerals is high. Appropriate supplementation can maximise trace mineral dependent enzyme functions during economically critical events. Injectable trace minerals have been shown to be an effective way to “top up” mineral levels prior to critical events such as calving, joining, or prior to times of reduced nutrition, such as drying off in dairy cows. This allows animals to maximise their production potential.



In a trial conducted by Daugherty et al 2000, beef cows were topped up with injectable trace minerals. The results clearly show the rapid depletion of liver copper levels over the calving period. The supplemented cows maintained a significantly higher copper level when compared to the untreated cows. Furthermore the treated group exhibited less depletion of copper liver levels post calving and returned to a higher status much faster than the untreated cows.

#### 2. Subclinical impacts

Not all trace mineral responsive conditions of livestock are apparent as a clinical disease. Response to supplementation can be seen in the areas of fertility, immunity and growth in otherwise apparently healthy animals through the increase of trace element dependant enzymatic functions.

### WHEN TO USE MULTIMIN

MULTIMIN is designed to be used to “top up” trace minerals prior to the following critical events

**Bulls:** 3 months before joining or semen collection or every 3-4 months

**Beef and dairy cows:**

- 4 weeks before joining or artificial insemination
- 4 weeks before calving
- 4 weeks before superovulation (embryo transfer)
- 4 weeks before embryo transfer in the recipient female
- 4 weeks before/at drying off (dairy)

**Calves:** At marking/branding

At or 4 weeks before weaning

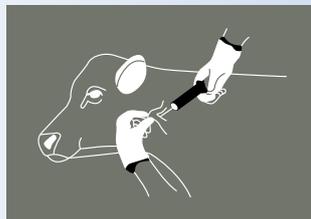
**Heifers:** Every 3 months, where required

4 weeks before joining

**Additional:** Every 2 months in wet conditions

### HOW TO USE MULTIMIN

MULTIMIN should be given by subcutaneous injection. It is recommended that the skin on the side of the neck of cattle is slightly pulled away (“tented”) and the recommended dose of MULTIMIN injected from top to bottom with a sterilised



1 to 1.5cm needle. It is important that the needle is penetrated through the skin from top to bottom, as a sideways, or bottom to top penetration may result in some of the liquid being lost through the injection site. If the correct procedure is followed, the very slight swelling resulting from the MULTIMIN injection will disappear within a day or two and no side effects will be experienced.

### CONTRAINDICATIONS

This product should not be used when selenium intake from pasture or supplementation is excessive. Professional advice is recommended if selenium is provided by other means (such as pasture top dressing, vaccine, pellets or selenium drenches) or if blood selenium levels are high. Excessive copper is toxic, do not administer unless a requirement for copper has been confirmed.

### PRECAUTION

MULTIMIN should not be administered to cattle suffering conditions that severely affect liver function such as staggers or photosensitisation. The absorption of oral trace mineral supplements can be antagonised (rendered unavailable) by high levels of calcium, iron, sulphur, fibre in drinking water and feeds/pasture.

### COMPOSITION

• Zinc as disodium zinc EDTA	40mg/mL
• Manganese as disodium manganese EDTA	10mg/mL
• Copper as disodium copper EDTA	15mg/mL
• Selenium as sodium selenite	5mg/mL

### DOSAGE

MULTIMIN is given by subcutaneous injection at the dose rate recommended below:

Up to 1 year: 1 mL/50kg

1-2 years: 1 mL/75kg

Over 2 years: 1 mL/100kg

### WITHHOLDING PERIODS/ESI

- Meat: Nil
- Milk: Nil
- ESI: Nil

### PRESENTATION

Liquid: 500mL

### STORAGE

Store below 30°C (room temperature) in original container. Once opened, bottle and unused product should be disposed of after 9 months.

### APVMA Number

- 59628



The content of this document is based on the label claims of an APVMA registered product as at November 2008.

**Virbac**  
ANIMAL HEALTH