



## BOLIFOR<sup>®</sup> MEGAMILK

### Identification

*Megasphaera elsdenii*, strain NCIMB 41125, is a natural microorganism isolated from the rumen of a healthy dairy cow adapted to a high-concentrate diet.

#### Description

Bolifor Megamilk is a probiotic supplement for dairy cows. It consists of 50 ml inoculum, containing  $10^8$  CFU per ml of *Megasphaera elsdenii* NCIMB 41125 at the time of manufacture, plus 200 ml of sterile growth medium. Each Bolifor Megamilk package supplies at least  $10^{10}$  CFU of *Megasphaera elsdenii* when prepared according to instructions.

### Special Advantages

#### The organism (patent pending)

- It has a high specific growth rate
- It utilises both D- and L-isomers of lactic acid
- It grows optimally at a pH of about 5.5, i.e. where the growth of most other bacteria is slow or inhibited

### The process (patent pending)

The **Bolifor Pack** consists of an outer foil bag with a dual-compartment inner bag. The Bolifor Pack allows for the *Megasphaera elsdenii* inoculum and growth medium to be kept separate until its intended use. It then allows for the inoculum and growth medium to be mixed and subsequently incubated. Incubation for approximately 24 hours results in 250 ml of a final product containing  $10^{10}$  live and active *Megasphaera elsdenii*, which is then ready to be orally dosed to the cow. This process has the advantage of supplying a high concentration of live active-phase bacteria to each animal at a critical time.

### Recommended use

Bolifor Megamilk is orally dosed to cows during early lactation when they are most likely to suffer from rumen acidosis. For the best results, it is recommended to give a first dose of Bolifor Megamilk on the third day after calving, to coincide with the **start of significant concentrate intake**, followed by a second dose between day 9 and day 11 after calving **when concentrate intake is increasing most rapidly**. The rate at which concentrate levels are increased after calving and the final concentrate level reached, is usually limited by the need to prevent acidosis. With Bolifor Megamilk's ability to prevent lactic acid accumulation in the rumen, it may also be used as an aid in enabling faster diet step-up and/or reaching higher final concentrate levels in the diet.

### Storage and handling

Bolifor Megamilk is supplied in cardboard boxes containing 12 Bolifor Packs each. Bolifor Megamilk should be stored between 10 and 25 °C, and exposure to large and/or repeated fluctuations in temperature during storage should be avoided.

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### Identifikasie

*Megasphaera elsdenii*, stam NCIMB 41125, is 'n natuurlike mikroörganisme wat geïsoleer is uit die rumen (grootpens) van 'n gesonde melkkoeie wat goed aangepas was op 'n hoë-konsentraat dieet.

#### Beskrywing

Bolifor Megamilk is 'n probiotiese aanvulling vir melkkoeie. Dit bestaan uit 50 ml inokulum wat  $10^8$  CFU per ml *Megasphaera elsdenii* NCIMB 41125 bevat ten tyde van vervaardiging, plus 200 ml steriele groeimedium. Elke Bolifor Megamilk pak voorsien ten minste  $10^{10}$  CFU van *Megasphaera elsdenii* wanneer dit volgens aanwysings voorberei word.

### Spesiale voordele

#### Die organisme (patent hangende)

- Dit het 'n hoë spesifieke groeitempo
- Dit gebruik beide die D- en L-isomere van melksuur
- Dit groei optimaal by 'n pH van ongeveer 5.5, d.i. waar die groei van meeste ander bakterieë stadig is of onderdruk word

### Die proses (patent hangend)

Die **Bolifor Pak** bestaan uit 'n foelie buitesak met 'n dubbelkompartement binnesak. Die Bolifor Pak maak dit moontlik om die *Megasphaera elsdenii* inokulum en groeimedium afsonderlik te hou tot wanneer die produk gebruik word. Die inokulum en die groeimedium word dan op daardie stadium vermeng en geïnkubeer. Inkubasie vir ongeveer 24 uur lewer 250 ml finale produk wat  $10^{10}$  lewendige en aktiewe *Megasphaera elsdenii* bevat en gereed is om mondelings aan die koeie gedoseer te word. Hierdie proses het die voordeel dat 'n hoë konsentrasie van lewendige, aktiewe-fase bakterieë op 'n kritieke tydstip aan elke dier voorsien word.

### Aanbevole gebruik

Bolifor Megamilk word tydens vroeë laktasie, wanneer koeie die vatbaarste vir rumen-asidose is, deur die bek aan hulle toegedien. Vir die beste resultate word dit aanbeveel dat 'n eerste dosis van Bolifor Megamilk toegedien word op die derde dag ná kalwing, om saam te val met die **aanvang van noemenswaardige konsentraatinnames**, gevolg deur 'n tweede dosis tussen 9 en 11 dae na kalwing **wanneer die konsentraatinnames vinnig verhoog**. Die tempo waarteen konsentraatvlakke ná kalwing verhoog en die finale dieetkonsentraatvlak word gewoonlik beperk deur die behoefte om asidose te voorkom. Met Bolifor Megamilk se vermoë om die opbou van melksuur in die rumen te verhoed, kan dit ook gebruik word as 'n hulpmiddel om dieetkonsentraatvlakke vinniger te verhoog en/of by 'n hoër finale dieetkonsentraatvlak uit te kom.

### Berging en hantering

Bolifor Megamilk word voorsien in kartondose wat elk 12 Bolifor Pakke bevat. Bolifor Megamilk moet tussen 10 en 25 °C gestoor word, en blootstelling aan groot en/of herhaalde temperatuurwisselings tydens berging moet vermy word.

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