

KRYPTADE®

- KRYPTADE is an isotonic electrolyte formulation designed for fast, gentle re-hydration of calves with scours. KRYPTADE specifically **aids the recovery of calves scouring from cryptosporidiosis** (crypto).
- KRYPTADE contains anti-crypto oocyst active ingredient betacyclodextrin, amino-acids, and seaweed extract, in combination with ENERVADE (electrolytes and prebiotic, soluble dietary fibre carbohydrates).
- Trials in New Zealand have shown crypto scouring calves return to milk appetite faster; calves come back to a solely milk diet over 24 hours earlier when treated with KRYPTADE than if treated with the electrolyte components alone.
- There is a considerable reduction in total electrolyte used to treat crypto scouring calves. Trials showed that this is about 40% lower.
- Calves will be noticeably brighter, earlier after treatment with KRYPTADE.
- Time to full recovery is reduced from 7– 8 days down to 3– 4 days with crypto scours.
- KRYPTADE is an ideal electrolyte for ALL transit, infectious or nutritional scours.

Dose Recommendations:

A dose is 80g KRYPTADE per 2 litres of warm water, repeated 6 – 8 hours apart on the first day.

To avoid relapse due to cryptosporidiosis give at least one dose daily on day 2 and day 3. Use as required on subsequent days. Some calves may require more than 2 x 2 litres per day.

Seek veterinary attention for calves not responding promptly.

Calves with cryptosporidiosis may be at risk of secondary bacterial infections requiring antibiotic treatment.

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KRYPTADE®

No withholding period
No prescription required

Contents: *Each 80gm dose of KRYPTADE in 2 litres of water contains w/w% NaCl 6.2g, NaHCO3 4.60g, KCl 0.7g, KH2PO4 2.0g, K citrate 0.1g, glycine 6.15g, dextrose 40g, contains beta-cyclodextrin (10g) and soluble dietary fibre prebiotic carbohydrates, with amino-acids and seaweed extract 21.25g.*

Cryptosporidiosis Scours

A veterinary diagnosis is recommended from groups of scouring calves, typically 4 - 6 calves per group. Samples should be tested to identify crypto and also aim to exclude other causes of scours. Samples for crypto diagnosis should use a semi-quantitative method of counting oocysts. EXAGEN is recommended daily for the first 10 - 12 days of life in calves at risk of cryptosporidiosis. Use in colostrum, milk or milk replacer.

To the Farmer

I am confident that KRYPTADE will provide you with real benefits in treating the dehydration associated with calf scours and especially that due to cryptosporidiosis.

Bruce Pauling BVSc
Managing Director



Available only from veterinarians

Packs: Sachets (10 x 80g/box), 5kg (62 doses), 15kg (185 doses)

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KRYPTADE®

Contains active ingredient:
beta-cyclodextrin

Stop waiting !!
Kryptade reduces
electrolyte use by 40%

Aids
Recovery from
Cryptosporidiosis



Electrolytes and faster recovery to milk

A revolutionary solution
for cryptosporidial scours and
all other calf scours

Knocks out crypto oocysts

KRYPTADE®

New Zealand developed, and researched for New Zealand farmers

Calf Dehydration—Scours and Cryptosporidiosis

- Targeted treatment against the dehydration from cryptosporidiosis in scouring calves has not been available in New Zealand until the development of KRYPTADE.
- When calves are raised as a mob (i.e. normal farm conditions) it is highly likely that more than one infectious agent will be present in the mob.
- One of the most important agents is *Cryptosporidium parvum* a protozoa which can also infect man.
- The importance of cryptosporidiosis arises because it damages the intestinal lining and leads to malabsorption, with an infection lasting several (5 - 12) days.
- The loss of fluids and electrolytes and acid-base imbalances over this period may be corrected with electrolyte solutions such as ENERVADE and KRYPTADE.
- When cryptosporidiosis infections are present beta-cyclodextrin in KRYPTADE will also directly attack the infective stages (oocysts), as they cycle and re-infect the calf's intestinal lining. This activity by beta-cyclodextrin explains the improvement in the rate of recovery from dehydration.
- The time period of this cycling in the intestinal lining means that treatments must be repeated over a 3 day period to ensure that self re-infection does not lead to re-establishment of infection with more scours.

The Calving Down Pad

The first, and most important point at which calves become infected is on the calving down pad when calves are in contact with mothers as they start seeking the udder for milk.

A cleaner (fresher) calving pad with earlier removal of calved cows and calves from this area will reduce the risk of infection transfer.

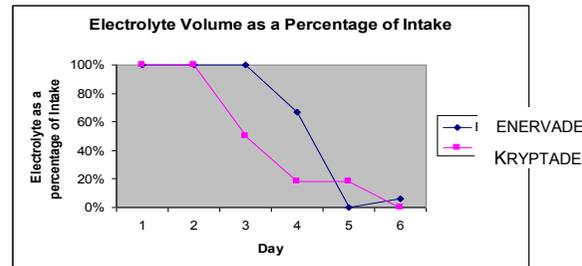
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Trialed in New Zealand under farm conditions

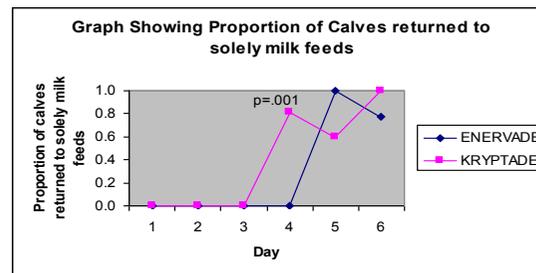
Cryptosporidiosis was confirmed in 12/14 calves as well as rotavirus in 2/12 calves. Total number of calves in the trial groups was 27.

Results: KRYPTADE treated calves responded more quickly with

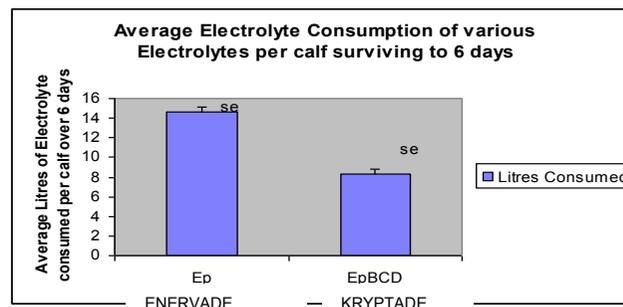
i) **Earlier desire for milk.**



ii) **Faster recovery onto a full milk diet.**



iii) **Lower electrolyte fluid intake** for the KRYPTADE treated calves was highly significant and volumes were reduced from 14.6 litres for ENERVADE to 8.6 litres per calf for KRYPTADE calves.



Conclusions & Summary:

The results in this trial confirm an electrolyte formulated with added beta-cyclodextrin has a statistically significant impact on the rate of recovery from the dehydration from scours associated with cryptosporidiosis.

Summary of Benefits

Brighter, more vigorous calves earlier - reversal of the depressed calf - absence of abdominal discomfort.

An improvement in the rate of recovery onto a full milk diet - 24 hours earlier.

A reduction of electrolyte intake - by as much as 40%.

Additional Notes:

There was no significant difference in mortality rates between treatment groups. There were insufficient numbers of calves in this trial for this benefit to be assessed.

Rebound scours did occur in both treatment groups indicating that when appetite did return that 2 litres of milk may be too high for a calf's recovering digestive system to manage. Lower volumes such as 250ml - 1 litre of milk are recommended as calves recover onto a full milk diet again.

Research on beta-cyclodextrin activity against *Cryptosporidium parvum*: The benefits reported in this field report of KRYPTADE are consistent with experimental studies of the activity of beta-cyclodextrin against cryptosporidiosis.

The Importance of Colostrum

Calves with failure of passive immunity transfer through low colostrum uptake are at much higher risk of infections and subsequently dying.

Failure of colostrum uptake may occur when the first milk is low in colostrum antibodies, if intake is inadequate, or delayed after birth.

Colostrum contains many other factors (including natural prebiotic carbohydrate components) to develop and protect a calf: It promotes normal development and maturation of health promoting bacteria, and the intestinal lining; which is very important for fat absorption. It promotes the development of the immune system and therefore its ability to reduce the risk of infection and the resulting excess inflammation.

Giving colostrum for longer than 1 - 2 days is strongly recommended to reduce the risk of disease causing infections from becoming established and causing serious signs of disease.

Colostrum transfer will not directly protect against cryptosporidiosis. However colostrum immunity transfer may reduce the complications including death rate from secondary infections.