1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Calcibel Forte, 380/60/50 mg/ml solution for infusion for horses, cattle, sheep, goats and pigs.

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Active substances:

Calcium gluconate for injection	380 mg	(equivalent to 34.0 mg calcium)
Magnesium chloride hexahydrate	60 mg	(equivalent to 7.2 mg magnesium)
Boric acid	50 mg	

Excipient:

Qualitative composition of excipients and other constituents
Water for injections

Clear, slightly, yellow-brownish solution, free from visible particles
Strongly hypertonic solution

Osmolarity: 0.690 – 0.850 Osmol/l
pH value: 3.0 - 4.0

3. CLINICAL INFORMATION

3.1 Target species

Horses, cattle, sheep, goats, pigs.

3.2 Indications for use for each target species

Acute hypocalcaemic conditions.

3.3 Contraindications

Do not use in cases of hypercalcaemia and hypermagnesemia.
Do not use in cases of idiopathic hypocalcaemia in foals.
Do not use in cases of calcinosis in cattle and small ruminants.
Do not use following administration of high doses of vitamin D3.
Do not use in cases of chronic kidney insufficiency or in cases of circulatory or cardiac disorders.
Do not use in cattle suffering septicaemic processes in the course of acute mastitis in cattle.
Do not administer inorganic phosphate solutions simultaneously or shortly after the infusion.
Do not use in cases of known hypersensitivity to the active substances or to any of the excipients.

3.4 Special warnings

None known.

3.5 Special precautions for use

Special precautions for safe use in the target species:
The veterinary medicinal product must be administered only slowly intravenously.
The solution should be warmed to body temperature before administration.

During infusion, heart rate, rhythm and circulation must be monitored.
In case of symptoms of overdosing (cardiac arrhythmia, fall in blood pressure, agitation), the infusion should be stopped immediately.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:
Care should be taken to avoid accidental self-injection as this may cause irritation at site of injection. In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label to the physician.
This veterinary medicinal product contains boric acid, and should not be administered by pregnant women and users trying to conceive.

Special precautions for the protection of the environment:
Not applicable.

3.6 Adverse events

Horses, cattle, sheep, goats, pigs:

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Hypercalcaemia[1] Bradycardia[2], tachycardia[3] Tachypnoea Restlessness Muscle tremors Hypersalivation General illness[4]

[1]Transient.

[2]Initially.

[3]Increase in heart rate following initial bradycardia may indicate overdose. In this case, stop the infusion immediately.

[4]Delayed undesirable effects may appear in form of disturbances of the general state of health and symptoms of hypercalcaemia up to 6 – 10 hours after administration and must not be diagnosed as recurring hypocalcaemia.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the national reporting system. See the package leaflet for respective contact details.

3.7 Use during pregnancy, lactation or lay

Pregnancy:
The safety of the veterinary medicinal product has not been established during pregnancy.
Use only according to the benefit-risk assessment by the responsible veterinarian.

3.8 Interaction with other medicinal products and other forms of interaction

Calcium increases the efficacy of cardiac glycosides.
Calcium increases the cardiac effects of β-adrenergic drugs and methylxanthines.

Glucocorticoids increase the renal excretion of calcium by vitamin D antagonism.

3.9 Administration route and dosage

For slow intravenous infusion
Cattle:
Acute hypocalcaemic conditions:
20-30 ml of this veterinary medicinal product per 50 kg body weight
(equivalent to 0.34 – 0.51 mmol Ca^{2+} and 0.12 – 0.18 mmol Mg^{2+} per kg body weight).

Horse, calf, sheep, goat, pig:
15-20 ml of this veterinary medicinal product per 50 kg body weight
(equivalent to 0.26 – 0.34 mmol Ca^{2+} and 0.09 – 0.12 mmol Mg^{2+} per kg body weight).

Infusion in horses should not exceed a rate of 4-8 mg/kg/h calcium (equivalent to 0.12-0.24 ml/kg/h of this veterinary medicinal product). It is recommended to dilute the required dose of this veterinary medicinal product 1:4 with isotonic saline or dextrose and to infuse over at least two hours.

The intravenous infusion must be executed slowly over a period of 20-30 minutes.
Dosage instructions above serve as guidance, but must be adapted to the existing individual deficit and condition of the circulatory system.
After a minimum of 6 hours after treatment, a second treatment may be administered. Additional treatments every 24 hours can be administered if persisting symptoms are clearly related to due to hypocalcaemia.

3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)

In case of overdose or if infusion has been carried out too rapidly, hypercalcaemia or hypermagnesemia with cardiotoxic symptoms as initial bradycardia with subsequent tachycardia, disturbances of the cardiac rhythm, and in severe cases ventricular fibrillation may occur. Other symptoms of hypercalcaemia are: motoric weakness, muscle tremor, increased excitability, restlessness, transpiration, polyuria, decrease in blood pressure, depression and coma.
Exceeding the maximum infusion rate may result in hypersensitivity reactions due to the release of histamine.
If the symptoms described above are observed, the infusion has to be stopped immediately.

Symptoms of hypercalcaemia may persist for 6-10 hours after infusion. It is important that these symptoms are not incorrectly diagnosed as a recurring hypocalcaemia.

3.11 Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance

Not applicable.

3.12 Withdrawal periods

Cattle, sheep, goats, horses:	Meat and offal:	Zero days
	Milk:	Zero hours
Pigs:	Meat and offal:	Zero days

4. PHARMACOLOGICAL INFORMATION

4.1 ATCvet code: QA12AX

4.2 Pharmacodynamics

Calcium
Calcium is among the most essential cations in the organism. Only free ionized calcium in the blood is biologically active and regulates calcium metabolism. Free calcium participates in many functions in the body, e.g. release of hormones and neurotransmitters, second message cascade in blood coagulation and formation of action potentials in sensitive membranes as well as muscle contraction. Physiological calcium concentration in animals is in the range of 2.3 and 3.4 mmol/L. In case of increased calcium needs, e.g. post partum, hypocalcaemia may develop. The symptoms of an acute hypocalcaemia are characterized by tetany or paresis.

Magnesium
Magnesium is another important cation in the organism. It contributes as a cofactor to numerable enzyme systems and transport processes and is of importance in polarization and conduction in nerves and muscle cells. In the neuromotoric excitation at the motoric end-plate magnesium decreases the liberation of acetylcholin. Magnesium ions may influence the release of transmitters at synapses of the CNS and vegetative ganglions. In the heart magnesium leads to a delayed conduction. Magnesium stimulates the secretion of parathormone and acts therefore regulating on the serum calcium level. The physiological serum levels of magnesium are different in the animal species and vary between 0.75 and 1.1 mmol/l. At magnesium serum concentrations below 0.5 mmol/l symptoms of an acute hypomagnesaemia occur. Especially in ruminants disturbances in magnesium metabolism appear, as in these animal species the absorption is less than in monogastric animals, especially after intake of young, protein-rich grass. As a consequence of hypomagnesaemia an increase of neuromuscular excitation in form of hyperaesthesia, ataxia, muscle tremor, tetany, recumbency, increasing loss in consciousness, and arrhythmia up to cardiac arrest may be observed.

The veterinary medicinal product contains calcium in an organic compound as calcium gluconate and magnesium in form of magnesium chloride as active substances. By the addition of boric acid, calcium borogluconate is formed, which increases its solubility and tissue tolerability. The main indication for its use is hypocalcaemic conditions. The addition of magnesium antagonises possible cardiac effects of calcium, especially following overdose or rapid infusion, and helps correct hypomagnesaemia, which frequently occurs in combination with hypocalcaemia.

4.3 Pharmacokinetics

Calcium
More than 90 % of total body calcium is found in bone. Only about 1 % is free to be exchanged with the calcium in serum and interstitial fluid. In the serum, 35 – 40 % of calcium is bound to proteins, 5 – 10 % is complexed with anions and 40 – 60 % is in the ionized form. The blood level is maintained within narrow limits by hormonal regulation involving parathormone, calcitonin, and dihydrocholecalciferol. Calcium is eliminated mainly through the faeces with small amounts eliminated in the urine.

Magnesium
In adult animals, around 50 % of magnesium is found in bone, 45 % in the intracellular space and 1 % in the extracellular space, of which 30 % is bound to proteins. The amount of magnesium sourced from diet varies between 15 and 26 % in adult cattle. Approximately 80 % is absorbed from the rumen. When grazing on young protein-rich grass pasture, the absorption may decrease to 8 %.
Magnesium is excreted by the kidneys at a rate proportional to the serum concentration and glomerular filtration.

5. PHARMACEUTICAL PARTICULARS

5.1 Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

5.2 Shelf life

Shelf-life of the veterinary medicinal product as packaged for sale: 3 years
Shelf-life after first opening the immediate packaging: use immediately

5.3 Special precautions for storage

Do not refrigerate or freeze.

5.4 Nature and composition of immediate packaging

Graduated, polypropylene bottle for infusion with bromobutyl rubber stopper and aluminium cap.
1 x 500 ml,
12 x 500 ml, packaged in a cardboard box

Not all pack sizes may be marketed.

5.5 Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products

Medicines should not be disposed of via wastewater or household waste.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

6. NAME OF THE MARKETING AUTHORISATION HOLDER

Bela-Pharm GmbH & Co. KG

7. MARKETING AUTHORISATION NUMBER(S)

VPA10445/007/001

8. DATE OF FIRST AUTHORISATION

12 November 2021

9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS

04 April 2025

10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database (https://medicines.health.europa.eu/veterinary).