Clostratox® Ultra C 1300 & Clostratox® C

Clostridium Perfringens Type C Antitoxin, Equine Origin

For use in cattle, sheep, and swine as an aid in the prevention and control of enterotoxemia caused by *Clostridium perfringens* Type C.

Product Numbers

Clostratox® Ultra C 1300
293 - 250 mL

Clostratox® C
305 - 250 mL

- **Effective — Clostratox C** contains Type C (Beta) antitoxin at a minimum of 500 International Antitoxin Units (I.A.U.s). **Clostratox Ultra C 1300** delivers extra as it contains at least 1300 I.A.U.s of *Clostridium perfringens* Type C antitoxin per mL.
- **Safe and Effective —** Novartis tests **Clostratox Ultra C 1300** & **Clostratox C** to assure purity, safety, and potency before they are released for general use.
- **Broad species/spectrum protection —** Both products are approved for multispecies protection. Piglets, feeder lambs, suckling calves and cattle can all be given these products.
- **Oral Administration for better meat quality — Clostratox Ultra C 1300** & **Clostratox C** are both approved for oral use in newborn piglets. **Clostratox Ultra C 1300** is also approved for oral use in newborn calves.

Clostratox® Ultra C 1300 & Clostratox® C

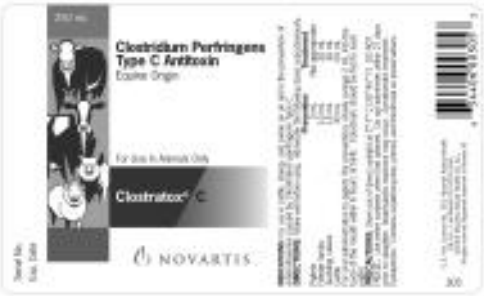
DIRECTIONS: Shake well before using. Administer the following doses subcutaneously.

	Prevention	Treatment
Piglets	3 mL	Not appropriate
Feeder lambs	10 mL	20 mL
Suckling calves	15 mL	30 mL
Cattle	30 mL	60 mL

Clostratox Ultra C 1300: For oral administration to piglets (for prevention), slowly syringe 2 mL into the back of the mouth within 6 hours of birth. For oral administration to calves (for prevention), slowly syringe 10 mL into the back of the mouth within 4 hours of birth. Colostrum should be fed to each newborn.

Clostratox C: For oral administration to piglets (for prevention), slowly syringe 2 mL into the back of the mouth within 6 hours of birth. Colostrum should be fed to each piglet.

PRECAUTIONS: Store out of direct sunlight at 2°-7° C (35°-45° F). DO NOT FREEZE. Use entire contents when first opened. Do not administer within 21 days prior to slaughter. Anaphylactic reactions may occur. Symptomatic treatment: Epinephrine. Contains oxytetracycline, phenol, and thimerosal as preservatives.



Customer Service
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www.livestock.novartis.com

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Technical disease information

Type C enterotoxemia is caused by an intestinal overgrowth of *Clostridium perfringens* Type C, which produces primarily beta and some alpha exotoxins. *Clostridium perfringens* Type C is widely distributed in the soil and is a common inhabitant of the intestinal tract. It is a gram positive, spore-forming rod that multiplies rapidly in the small intestine when conditions are right.

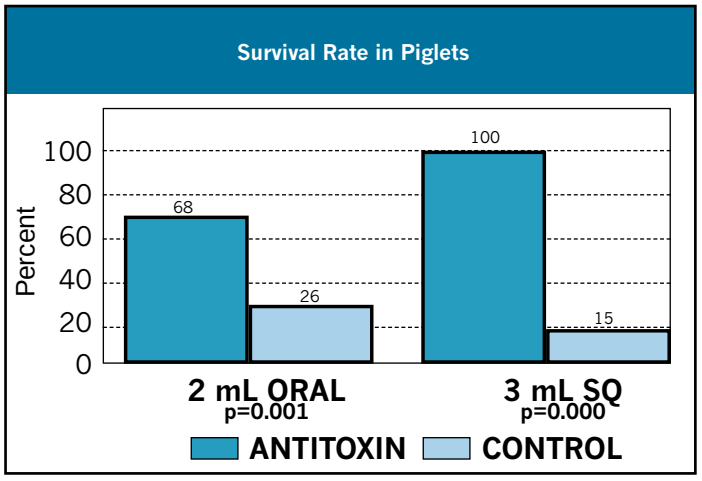
Calves, lambs, and piglets from one to ten days old may be found dead without previously showing symptoms. If seen, symptoms include abdominal pain, diarrhea (sometimes blood-tinged), depression, and cessation of nursing.

Engorgement with milk or grain is considered a predisposing factor for enterotoxemia. It is believed that a large intake of milk may slow the digestive processes, allowing the clostridial bacteria time to multiply. In addition, the proteolytic enzyme trypsin, which can inactivate the beta toxin, may not be present in adequate concentrations under these circumstances. It is usually the healthy, vigorous offspring of high-producing mothers that are affected by the disease.

Postmortem lesions vary according to the predominating type of exotoxin. If alpha toxin predominates, there may be extensive hemorrhage in the jejunum and ileum as well as in the mesenteric and intestinal lymph nodes. There may be blood-stained contents in the lower small intestine and the colon. If beta toxin predominates, there may be necrosis of the jejunum and ileum and peritonitis. Petechial hemorrhages may be found on the spleen, heart, thymus, and serosal surface.

Older animals may also be affected with Type C enterotoxemia. Pigs between 10-20 days old may have a more chronic and fatal form. Adult sheep changing from dry to lush feed or starting on supplemental grain can show acute symptoms and sudden death. Feedlot cattle that are brought up too rapidly on highly concentrated feeds or adult cattle, which accidentally ingest large amounts of grain, may show depression, toxemia, and death.

Figure 1: Efficacy of Clostratox C against *Cl. perfringens* Type C challenge



In herds or litters where the morbidity is high, prophylactic treatment with **Clostratox C** or **Clostratox Ultra C 1300** to neonates prior to appearance of symptoms is recommended. As illustrated by the study results above, Clostratox C can effectively prevent morbidity and mortality in neonates.

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