

Here's how Estrumate® can be used in managing reproduction in cattle, and in conjunction with other products from our comprehensive range

Indication*	Target treatment group	Dose and route	Recommended treatment scheme	Remarks
Estrus induction and synchronization	Dairy and beef heifers	2ml/animal, i.m.		Heifer should have obtained at least 75% adult body weight Only animals with established cyclicity
	Dairy cows	2ml/animal, i.m.		Do not breed animals before 45 days post calving Only animals with established cyclicity
	Beef cows	2ml/animal, i.m.		Do not breed animals before 45 days post calving Less good results can be expected in non-cycling animals
Subestrus and silent heat Treatment of luteal cysts and corpus luteum persistent	Cows and heifers	2ml/animal		Temporary weaning of calf from 48h before breeding is recommended
				Detailed examination to assess the ovarian activity/status is recommended before treatment Additional treatment with Receptal® stimulates growth of a new dominant follicle
Supportive treatment of uterine infections (endometritis, pyometra)	Cows	2ml/animal, i.m.		Estrumate® injection is recommended especially in animals with the presence of corpus luteum confirmed and in all cases of pyometra
Induction of calving	Cows	2ml/animal, i.m.		Do not induce labor >7 days before the expected calving date Increased frequency of placental retention can be observed

* Please bear in mind that this indication list reflects the standard international product profile. For list of indications licensed for Estrumate® in your country consult the insert leaflet or contact our MSD Animal Health representative



Estrumate®
(cloprostenol sodium)
Prostaglandin analogue
Equivalent to 250 mcg cloprostenol/ml

Description: Estrumate® (cloprostenol sodium) is a synthetic prostaglandin analogue structurally related to prostaglandin F_{2α}. Each ml of the colorless aqueous solution contains 263 mcg of cloprostenol sodium (equivalent to 250 mcg of cloprostenol).

Indications in cattle: (A) Controlled breeding (estrus synchronization).
(B) Therapeutic indications.
* Treatment of non-detected estrus associated with a functioning or persistent corpus luteum (absence of heat in the first 90 days post-partum).
* Treatment of chronic endometritis / pyometra associated with a functioning or persistent corpus luteum.
* Treatment of ovarian luteal cysts.
* Induction of parturition.
* Termination of pregnancy.

Horses: (A) Controlled breeding (as an aid to stud management).
(B) Therapeutic indications.
* Treatment of conditions associated with a functioning or persistent corpus luteum).
* Induction of luteolysis in case of prolonged diestrus or "pseudpregnancy".
* Induction of luteolysis following early foetal death and resorption (during the first 40 days of pregnancy).
* Establishing visible estrus cycles in case of "silent heat" in barren / maiden or in early post-partum mares.

Contraindications: Estrumate® Do not use in pregnant animals unless the objective is to terminate the pregnancy.
* Do not use in animals with spastic diseases of the respiratory or gastrointestinal tract.

Dosage for each species, route and method of administration:
Cattle: For dairy or beef cattle: Single or repeated doses of 2 mL Estrumate® per animal administered by **INTRAMUSCULAR INJECTION**.

Horses: Ponies and donkeys: Single or repeated doses of 0.5 to 1 mL Estrumate® per animal administered by **INTRAMUSCULAR INJECTION**.

Thoroughbreds, hunters and heavy horses: Single or repeated doses of 1 to 2 ml Estrumate per animal administered by **INTRAMUSCULAR INJECTION**.

Presentation: vials containing 10ml, 20ml, 50ml or 100ml.
* Not all pack sizes may be marketed.

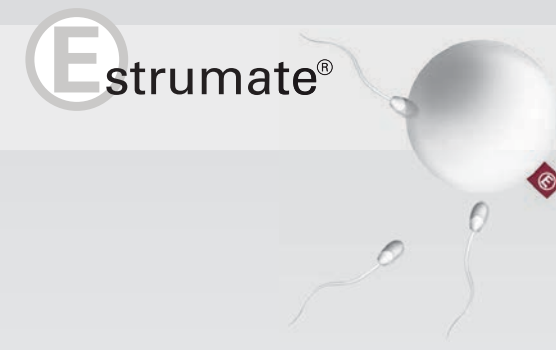


No matter where you are - a tool you can trust!



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Prostaglandins – an essential tool for the bovine practitioner

For decades, prostaglandins have played an integral part in the management of reproduction in cattle. Thanks to its luteolytic activity $PGF_{2\alpha}$ is used to induce and synchronize estrus, as well as in the treatment of various reproductive disorders. Combining its luteolytic and uterotonic actions it has been used in the treatment of uterine disorders, and to induce calving.

A trusted tool from MSD Animal Health

We are now presenting Estrumate®, for so many years the gold standard in efficacy and flexibility in the prostaglandin treatment of cattle, as a key element of our comprehensive portfolio for the management of reproduction and uterine health. It is backed by years of experience, extensive technical knowledge, and the support of our experts in the field.

During this time, Estrumate® has proved to be highly effective in veterinary use in various different types of cattle, practically all over the world.

Treatment of various uterine disorders

Estrus induction & synchronization in heifers and cows:

- for AI
- for natural service
- for ET

Induction of calving

Treatment of suboestrus and anoestrus

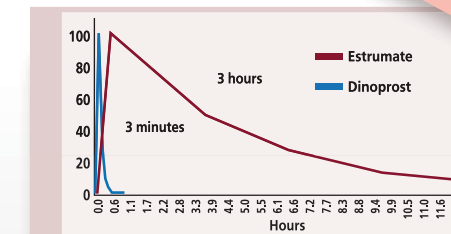
Treatment of luteal cysts and corpus luteum persistent

Estrumate® (cloprostenol sodium) – reliability of a synthetic analogue

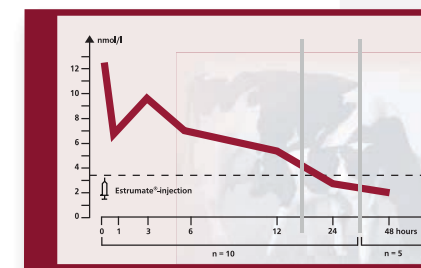
Estrumate® contains cloprostenol, a synthetic analogue of $PGF_{2\alpha}$ characterized by a medium duration of half life (approx. 3 hours in contrast to just a few minutes in case of natural prostaglandin).

The prolonged half life and resulting more efficient and longer binding of prostaglandin-receptors is a direct result of the structure of the cloprostenol molecule and lower elimination time than observed for natural analogues. This ensures that after just one injection of Estrumate® an efficient luteolysis is achieved

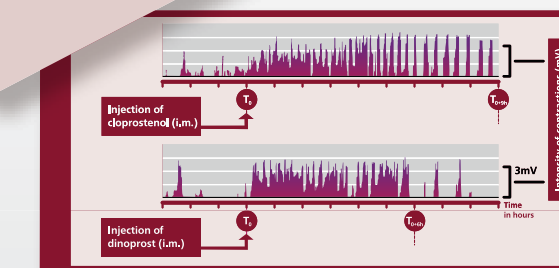
	Estrumate® (cloprostenol sodium)	Endogenous $PGF_{2\alpha}$ and natural analogues (e.g. dinoprost trometamate) (Very short) Few minutes
Half life	3 hours	
Clearance	Resistant to action of 15-hydroxy-dehydrogenase and 13,14-reductase	Almost completely degraded after one or two passages through the liver and/or lungs



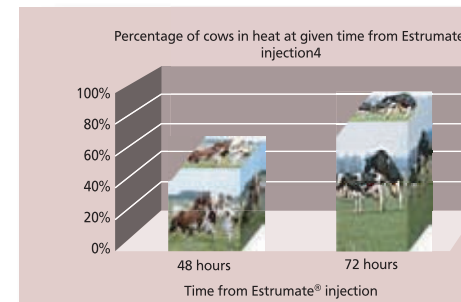
Longer residence of the $PGF_{2\alpha}$ analogue in the system = more efficient receptor stimulation¹



Rapid decrease of progesterone concentrations in the circulation promotes the onset of estrus with well-expressed behavioral signs at a highly predictable time²



Stimulation of strong and consistent contractions of the myometrium³



A trusted tool in estrus management and in the treatment of irregularities of the estrous cycle caused by persistent corpus luteum and luteal cysts

Important addition in the treatment of endometritis: elimination of immunosuppressive effect of progesterone⁵ and improved uterine motility

