

# UBRICINA® LACTATION PLUS

REGISTRATION: Q-0209-124



## Intramammary suspension

Broad-spectrum cephalosporin, antimastitic, and corticosteroid anti-inflammatory during lactation.



### FORMULA

#### Each 6 g contain:

Ceftiofur hydrochloride	250 mg
Prednisolone acetate	10 mg
Vehicle q.s.	6 g

### Use in species



Cattle (meat and milk) during lactation

#### • PHARMACOKINETICS

After administration, it is rapidly metabolized to desfuroylceftiofur, which contains a sulfhydryl group and furoic acid. Desfuroylceftiofur retains an intact  $\beta$ -lactam ring and is the main active residue, microbiologically equipotent to ceftiofur against most pathogens affecting domestic animals. Plasma concentrations reach a maximum of  $2.85 \pm 1.11$  mg/mL two hours after injection, decreasing over the next 22 hours to  $0.64 \pm 0.14$  mg/mL at 24 hours post-treatment.

Concentrations in lochia or fluids reach a maximum of  $0.98 \pm 0.25$  mg/g at four hours after injection, decreasing to  $0.22 \pm 0.21$  mg/g at 24 hours post-treatment.

Serum levels are determined by plasma protein binding and renal elimination rate; distribution is limited to extracellular fluids, with high concentrations in liver, kidney, intestine, bile, lymph, and semen. It penetrates well into pleural, pericardial, and synovial fluids.

Active urinary concentrations are extremely high, though penetration into prostatic fluid is poor. Elimination is almost entirely renal, via glomerular filtration and tubular secretion, explaining high urinary levels that exceed blood values.

It is metabolized in the liver to desfuroylceftiofur as the primary metabolite and furoic acid.

Prednisolone is rapidly absorbed. Peak plasma concentrations occur 1–2 hours after administration.

Once absorbed, prednisolone is widely distributed. The drug binds extensively to plasma proteins; only the free fraction is active.

Prednisolone, like all corticosteroids, crosses the placenta and is excreted in milk. It is metabolized in the liver and eliminated in urine as conjugated sulfates and glucuronides.

#### • PHARMACODYNAMICS

The bacterial cell wall is essential for bacterial growth and development and has a heteropolymeric component (peptidoglycan) that provides mechanical stability due to its lattice structure.

This peptidoglycan consists of glucan chains of two alternating amino sugars: N-acetylglucosamine and N-acetylmuramic acid, cross-linked by peptide chains.

Biosynthesis involves about thirty bacterial enzymes and occurs in three phases: precursor formation in the cytoplasm (UDP acetylmuramyl-pentapeptide and UDP acetylglucosamine), formation of a long polymer, and transpeptidation mediated by a membrane-bound transpeptidase, producing peptidoglycan.

Ceftiofur acts by blocking cell wall formation, inhibiting transpeptidase and the transpeptidation mechanism of amino sugars; without cell wall formation, bacteria die due to external pressure.

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Prednisolone is a synthetic glucocorticoid with the general properties of corticosteroids. It has greater anti-inflammatory and glucocorticoid activity than hydrocortisone, being three times more potent than the adrenal cortex hormone, and shows markedly reduced mineralocorticoid activity compared to hydrocortisone.

Its biochemical effect is at the cellular level, not plasma. It binds to plasma proteins at 70–90% and has a half-life of two to four hours.

## INDICATIONS FOR USE AND TARGET SPECIES:

For the treatment of clinical, subclinical, acute, or chronic mastitis caused by Gram-positive and Gram-negative bacteria, including beta-lactamase-producing strains, in cattle (meat and milk) during lactation.

## DOSAGE

Lactating cattle: One 6 g syringe in each affected mammary gland. Apply immediately after milking and disinfecting the teat sphincter; gently massage the mammary gland to improve diffusion of the medication. Teats should be sealed. The dose should be repeated every 24 hours at the veterinarian's discretion.

**ROUTE OF ADMINISTRATION:** Intramammary

## WITHDRAWAL PERIOD:

Milk from treated animals must not be used for human consumption or processing until 32 hours have elapsed after the last treatment.

## STORAGE CONDITIONS:

Store the product in a cool place at no more than 25 °C, dry and protected from light. Keep out of reach of children..

## WARNINGS:

Do not administer to animals sensitive to the ingredients of the formula.  
Sale requires a medical prescription.  
Product for exclusive use in veterinary medicine.  
Sale requires a medical prescription.

**For exclusive use by the Veterinarian.**