

# Cloxam-LC

## Intra-mammary Suspension

For Veterinary Use Only

### COMPOSITION:

Each 3g syringe contains:

Ampicillin Sodium equivalent to Ampicillin .....75mg  
Cloxacillin Sodium equivalent to Cloxacillin .....200mg

### DESCRIPTION:

CLOXAM-LC is an intramammary product for the routine treatment of mastitis in lactating cows.

The active ingredients, Ampicillin and Cloxacillin are semi-synthetic penicillin, derived from the penicillin nucleus 6- amino penicillin acid.

Ampicillin is a broad spectrum penicillin effective against many gram negative and gram positive organisms.

Cloxacillin is a  $\beta$ -lactamase (penicillin) stable penicillin. It is therefore effective against both penicillin-resistant and penicillin-sensitive staphylococci.

The antibiotic combination of Ampicillin and Cloxacillin is broad-spectrum and active against gram-positive and gram negative bacteria including penicillin sensitive staphylococci, *Corynebacterium pyogenes* and *Escherichia coli*.

### INDICATIONS:

CLOXAM-LC is used for the treatment of mastitis in cows, Buffaloes, Ewes and Goats at the period of lactation also used to provide protection against further infections.

It is active against both gram + ve & gram - ve organisms which are associated with mastitis *Streptococcus* spp., like *Streptococcus agalactiae* and *Streptococcus dysgalactiae*, *Staphylococcus* spp., *Corynebacterium pyogenes* and *E. coli*.

### DOSAGE & ADMINISTRATION:

Milk out udder completely. Wash udder and teats thoroughly with warm water. Dry thoroughly.

Recommended dosage of CLOXAM-LC is a course of 3 syringes per infected quarter(s) infused at 12hrs intervals.

After milking, clean and disinfect the teats. Insert the nozzle into teat canal and apply gentle pressure. Infuse 1 syringe into each quarter by applying gentle and continuous pressure until all the suspension is injected. After infusion, dip each teat in an approved antiseptic teat dip.

### ADVERSE REACTIONS (FREQUENCY AND SERIOUSNESS):

No known undesirable effects.

#### Use during pregnancy, lactation or lay

Milking Cow is specifically indicated for the treatment of clinical mastitis in lactating cows. It can be safely administered to pregnant animals.

Interaction with other medicinal products and other forms of interactions

None known.

### PHARMACODYNAMICS:

CLOXAM-LC is a combination of ampicillin and cloxacillin. Cloxacillin is a narrow-spectrum antibiotic of the isoxazolyl penicillin group; it is not inactivated by staphylococcal  $\beta$ -lactamases. Ampicillin is a broad-spectrum antibiotic of the aminopenicillin group; it is not resistant to  $\beta$ -lactamases.

Both ampicillin and cloxacillin are bactericidal antibiotics and act by interfering with the formation of new bacterial cell wall by dividing organisms.

The prevalence of acquired resistance is geographically variable and for select species may be very high. Local information on resistance is desirable, particularly when treating severe infections. CLOXAM-LC susceptibility rates are higher than ampicillin rates due to the cloxacillin activity against  $\beta$ -lactamase producing staphylococci. Methicillin-susceptible *Staphylococcus aureus* (MSSA) and methicillin-susceptible coagulase-negative staphylococcus (MSCoNS) are commonly susceptible to CLOXAM-LC. MRSA and MRCoNS are resistant to CLOXAM-LC. For all other indicated bacterial species, the susceptibility of CLOXAM-LC is similar to ampicillin including limited activity against Gram-negative organisms.

### PHARMACOKINETICS:

### Absorption:

Both ampicillin and cloxacillin are stable in the gastric environment resulting in good absorption. Neither component of the combination of ampicillin and cloxacillin interferes with the absorption or excretion of the other.

The total quantity absorbed by the oral route represents 50% (cloxacillin) and 40% (ampicillin) of the quantity administered.

The presence of food in the stomach may depress oral absorption and CLOXAM-LC should therefore be taken 0.5 to 1 hour before meals.

### Distribution:

CLOXAM-LC diffuses well into most tissues and body fluids including, among others, bronchial secretions, sinuses, saliva, cerebrospinal fluid (variable percentage depending on the degree of meningeal inflammation), bile, serous membranes and middle ear.

Crossing the meningeal barrier: CLOXAM-LC diffuses in only small proportion into the cerebrospinal fluid of subjects whose meninges are not inflamed.

Crossing into breast milk: CLOXAM-LC is excreted in small quantities in breast milk.

Plasma half-life for cloxacillin is 0.5 to 1 hour and 1 to 1.5 hour for ampicillin.

Protein binding: the serum protein binding proportion is approximately 94% for cloxacillin and 18% for ampicillin.

### Metabolism:

In normal subjects approximately 20% (cloxacillin) and 40% (ampicillin) of the dose administered is metabolised.

### Excretion:

CLOXAM-LC is eliminated mainly through the kidney. Approximately 30% of the dose administered orally and over 60% of the ampicillin dose administered parenterally is eliminated in active form in the urine within 24 hours. The equivalent percentages for cloxacillin are approximately 20% and 30% respectively. A small proportion (10%) of the dose administered is excreted in bile.

### WITHDRAWAL TIME:

**Meat:** 07 days.

**Milk:** 60 hours (5 milking) after the last treatment.

### CONTRAINDICATIONS:

Do not use in animals with known hypersensitivity to the active ingredient.

### PRECAUTIONS:

Do not use in animals sensitive to penicillin.

Milk of treated animals should not be used for calves during treatment. Evacuate the syringe completely.

Wash udder and teat thoroughly with warm water containing suitable disinfectant.

Store between 15-25°C at a cool and dry place.

Keep out of the reach of children.

### BP Vet Specs



Manufactured by:  
Selmores Pharmaceuticals (Pvt) Ltd.  
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