



PRODUCT INFO  
& DATASHEET

# OXYTETRACYCLINE

Oxytetracyclini hydrochloridum 100 %    Eur.Ph.II    yellow crystalline powder  
Tetracyclini hydrochloridum 100 %    Eur.Ph.II    yellow crystalline powder

## **INDICATIONS**

The use of the tetracyclines is indicated in systemic and local infections such as bronchopneumonia, bacterial enteritis, urinary tract infections, cholangitis, metritis, mastitis, prostatitis and pyoderma. Specific indications for cattle are:

- respiratory infections caused by *Pasteurella haemolytica* and *Pasteurella multocida*;
- panaritium caused by *Fusobacterium necrophorum*;
- Mortellaro infections;
- chlamydiosis;
- infections of the cornea and conjunctiva caused by *Moraxella bovis*.

Specific indications for pigs are:

- respiratory infections caused by *Pasteurella multocida* and *Bordetella bronchiseptica*;
- actinobacillosis, e.g. *haemophilus*;
- mycoplasmosis.

A specific indication for poultry is: chronic respiratory disease (CRD).

## **DOSAGE**

- Oral administration :
- \* Calves : 20 - 40 mg per kg of body weight, for 3 - 7 days.
  - \* Pigs and poultry : 20 - 40 mg per kg of body weight or 800 -1600 g per ton of feed or 400 - 800 g per 1000 litres of drinking-water, for 3 - 7 days.
- Parenteral administration : All animals: 10 - 20 mg per kg of body weight, for 3 - 5 days.  
Topical administration : Footbath treatment for cattle: 1 g per litre of water, for 3 days. Repeat after 14 days.

## **DOSAGE INTERVAL**

Oral : 12 hours. Parenteral : 24 hours.

## **REMARK**

In order to reach therapeutic plasma levels, the recommended dose for oxytetracycline is minimally 800 - 1000 g per ton of feed, due to the fact that the bio-availability of tetracycline given with the feed is less than 50 %. This is in contrast to the formerly recommended dose.

## **SOLUBILITY**

The tetracyclines are at first very soluble but ca. 0.5 -1 hour after dissolving, they crystallize out; also the so-called "drinking-water quality". Solubility is greatly improved by adding a strong acid: "Robisol". A more elegant method is using our product Oxytetracycline 50%. This powder is immediately soluble when the directions for use are followed.

## **PHARMACODYNAMICS**

The tetracyclines are broad spectrum antibiotics, which in normal doses act bacteriostatically and in very high doses bactericidally. The tetracyclines inhibit the bacterial protein synthesis by binding to the bacterial ribosomes.

## **PHARMACOKINETICS**

In most mammals, after oral ingestion, the tetracyclines are reasonably well absorbed. Absorption is decreased in the presence of divalent cations (calcium in milk!). In poultry, absorption is less efficient. The absorption percentage for oxytetracycline following oral ingestion is given as 60 - 80%. After absorption, the tetracyclines are widely distributed throughout the body tissues, but in the cerebrospinal fluid only when this is inflamed or damaged.

The highest concentrations are to be found in the kidneys, liver, bile, spleen and the lungs. The tetracyclines are irreversibly incorporated in growing bone tissue and teeth. Minimally 70% of the plasma levels is reached in the milk, in mastitis this is even higher (to 110%). The tetracyclines are very slightly taken up in the tissues. Ca. 50 - 80% is eliminated via the kidneys and ca. 10% is excreted unchanged via the faeces. For most animals, the half-life of oxytetracycline is ca. 9.5 hours. For calves younger than 3 months, the half-life of oxytetracycline is ca. 10 -13 hours.