Methoxasol®

20/100 MG/ML TRIMETHOPRIM/SULFAMETHOXAZOLE

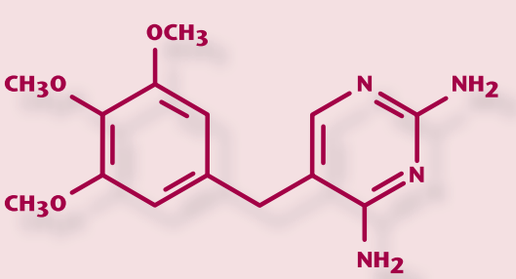
Why choose Methoxasol

1 Powerful combination
2 Optimal synergy
3 High quality solubility and stability in solution
4 Easy to dose
5 Highly effective
6 Safe and Short withdrawal

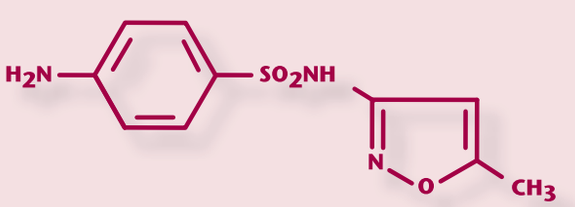
The new standard in oral medication

eurovet Animal Health

1 - Powerful Combination



Structural formula of trimethoprim



Structural formula of sulfamethoxazole

Methoxasol contains 20 mg trimethoprim and 100 mg sulfamethoxazole per ml.

Synergy

In vitro trimethoprim is generally bacteriostatic and has a broad spectrum of activity against both gram-positive and gram-negative bacteria. A synergistic and bactericidal effect occurs when trimethoprim is combined with sulfamethoxazole, because trimethoprim and sulfamethoxazole inhibit sequential steps in the synthesis of tetrahydrofolic acid, an essential metabolic cofactor in bacterial synthesis of purine and, subsequently, DNA.

Sulfamethoxazole: a potent sulfonamide

- More active than sulfadimidine and sulphadiazine.[1]
- More active than sulfadimethoxine.[2]
- One of the best choices from the point of intrinsic potency attributable to synergism with trimethoprim.[3]

Indications

Methoxasol is indicated for treatment and prevention of respiratory infections caused by *Actinobacillus pleuropneumoniae* susceptible to trimethoprim and sulfamethoxazole where the disease has been diagnosed in the herd in swine and for treatment and prevention of respiratory infections caused by *Escherichia coli* susceptible to trimethoprim and sulfamethoxazole where the disease has been diagnosed in the flock in broilers.

Methoxasol: The new standard in oral medication

2 - Optimal Synergy

Pharmacokinetics

- Both active ingredients are rapidly absorbed.
- Steady state concentrations in plasma from 9 hours after the start of medication onwards in swine and from 12 hours onwards in poultry.
- The combination distributes widely in tissues.

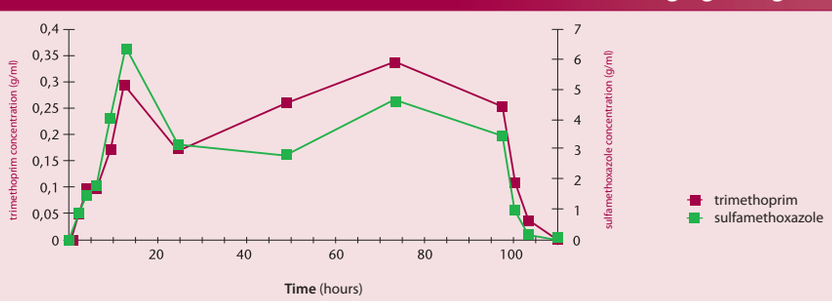
Corresponding elimination half lives

Sulfamethoxazole has a short elimination half-life (2.3 hours in swine and 1.7 hours in poultry), similar to that of trimethoprim (2.5 hours in swine and 1 hour in poultry). This results in optimal synergy of the combination throughout the treatment period. Secondly, this short T 1/2 results in short and safe withdrawal times.

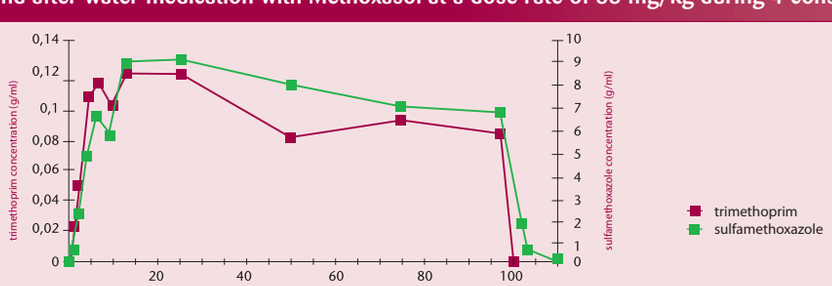
Plasma concentration – time curves

For both animal species the time over MIC is equal throughout the whole treatment period

Trimethoprim and sulfamethoxazole concentrations in plasma of swine during and after water medication with Methoxasol at a dose rate of 25 mg/kg during 4 consecutive days



Trimethoprim and sulfamethoxazole concentrations in plasma of poultry during and after water medication with Methoxasol at a dose rate of 35 mg/kg during 4 consecutive days



These graphs show that effective plasma concentrations of both trimethoprim and sulfamethoxazole are reached quickly after onset of medication and drop quickly to levels below MRL within limited time after stopping medication. During steady state plasma concentration of both actives are well over MIC, both for poultry and swine.

3 - High solubility and stability in solution

Methoxasol is a clear, pale yellow to brownish yellow solution.

Excellent solubility

The product is already in solution and does not precipitate when added to water.

Excellent stability in hard and soft water

- Extensive lab testing proves the stability is excellent, also in comparison to other tmps solutions.
- Therapeutic solutions stable for 24 hours.
- Concentrated solutions (200 ml Methoxasol / litres drinking water) stable for 24 hours.
- Medicated drinking water and stock solutions should be freshly prepared every 24 hours.
- No blockage of nipple-systems.
- Can be used in proportional medicators .

Therapeutic concentration reference product

Therapeutic concentration Methoxasol

100x Therapeutic concentration reference product

100x therapeutische dosering Methoxasol

Dose rates

Pigs: 25 mg TMPS per kg body weight per day, corresponding to 1 ml of the veterinary medicinal product per 4,8 kg body weight per day. This corresponds to approximately 1 litre of the veterinary medicinal product in 500 L drinking water, for 3-4 days.

Broilers: 33 mg TMPS per kg body weight per day, corresponding to 1 ml of the veterinary medicinal product per 3,64 kg body weight per day. This corresponds to approximately 1 litre of the veterinary medicinal product in 750 L drinking water, for 3-4 days.

One litre of the veterinary medicinal product weighs 1079 gram; therefore weight can also be used to measure the product quantity to be added in drinking water, according to the following formula:
Amount to be added in drinking water (g/L) = calculated ml/L x 1.079.

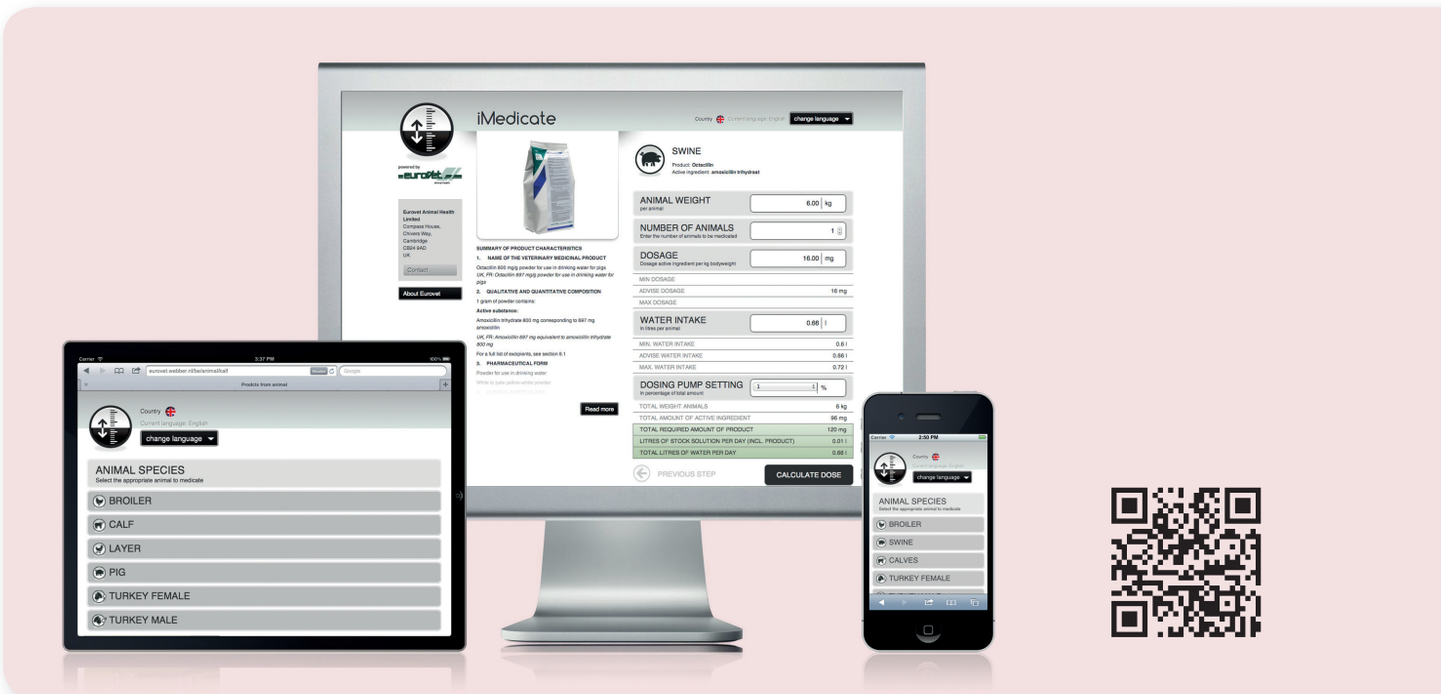
4 - Easy to dose

pH dependency

Solubility and stability of the veterinary medicinal product in drinking water are pH-dependent. The pH of the product is in the high alkali range.
The product can be added directly to the drinking water to prepare a therapeutic solution at the calculated concentration, but can also be used in a concentrated stock solution by adding 200 ml of the veterinary medicinal product per litre water and to dilute this further if required. Do not use Methoxasol undiluted or in higher concentrated stock solutions.

Dosage calculation

The calculation tool iMedicate® is available for PC, iPad and Smartphone (iPhone/Blackberry/Android) on www.imedicate.eu. Download the App now on the same location or with the QR code below.



Taste

A 2 ½ fold overdose is well tolerated by pigs.
In chicken an acute overdose will not occur because the birds will be reluctant to drink the strongly concentrated drinking water (too bitter taste if above 2 litres of the veterinary medicinal product per 1000 litre drinking water). Chronic overdose in chicken will result in a strongly diminished water- and feed intake and retarded growth.

Dosage scale on the packaging

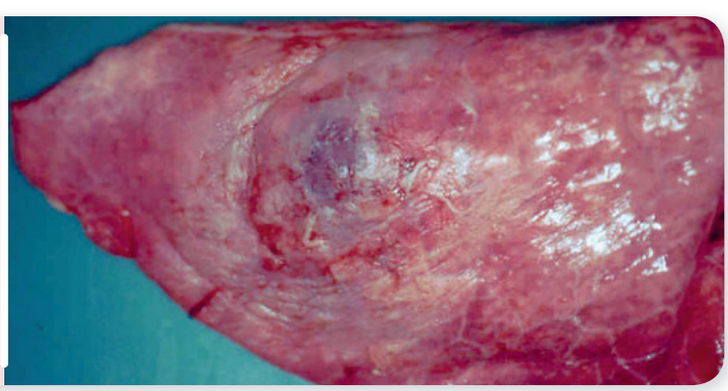
Scale on the packaging is an indicator of the amount that is left. This is an extra help to assure the correct amount is used. The measure correctly the use of an weighing scales or volume measurement device is advised.

The new standard in oral medication

5 - Highly effective

Pig

In two controlled, randomised blinded GCP studies, Methoxasol was demonstrated to be highly efficacious in the reatment of respiratory infections caused by *Actinobacillus pleuropneumoniae* in swine.



Poultry

The results of a controlled trial demonstrate that Methoxasol is highly effective for treatment of infections in poultry caused by *E. coli* strains susceptible to the combination of trimethoprim-sulfamethoxazole.

This provides the farmer and the veterinarian the possibility to fight *E. coli* infections in young broiler chicks or somewhat older birds in case of more chronic infections. In this indication not a lot of molecules are effective and in use.

6 - Safe and short withdrawal

Safe for the treated animals

- Safe in pigs, even at twice the recommended dosage or treatment duration.
- No adverse effects in poultry when administered at the recommended dose rate.
- Overdosing in poultry results in decreased water consumption.

Safe for the user

- No special precautions need to be taken by the user.
- Short withdrawal times maximise consumer safety.
- When attention is paid to the withdrawal period, consumer safety is maximised.

Safe for the environment

- Results of studies* confirm that, when Methoxasol is used as recommended, there will be no detrimental effects on the environment.

Short withdrawal times in poultry and in swine

Meat and offal:
Pigs: 5 days
Broilers: 6 days

Eggs:
Not authorised for use in laying birds producing eggs for human consumption.

** Source: data on file*

References

1 Prescott, J.F. and Baggot, J.D. (1993) in Antimicrobial Therapy in Veterinary Medicine, J.F. Prescott and J.D. Baggot editors, Iowa State University Press 1993.

2 Mengelers M.J.B., van Klingeren B. and van Miert A.S.J.P.A.M. (1990) In vitro susceptibility of some porcine respiratory tract pathogens to aditoprim, trimethoprim, sulfadimethoxine, sulfamethoxazole, and combinations of these agents. Am. J. Vet. Res. 51, 1860-1864.

3 Duijkeren van E. et al. (1994) In vitro susceptibility of equine Salmonella strains to trimethoprim and sulfonamide alone or in combination. Am J.Vet. Res. 55:10, 1386-1390

Productinformation

Include your country specific product text here

Design and realization: Comcorde Grafimedia, Bladel

Eurovet Animal Health BV
www.eurovet-ah.com

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