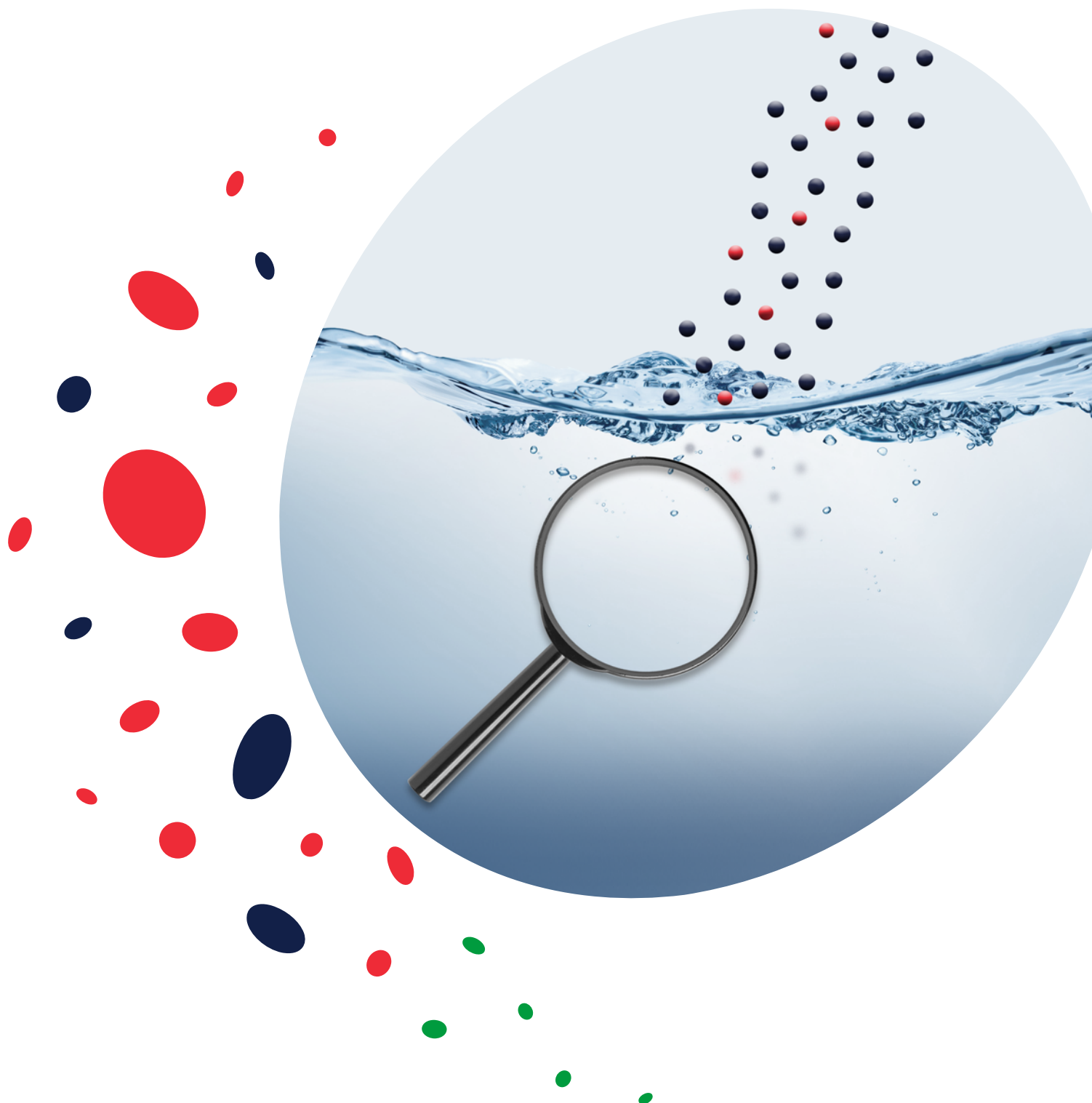


HydroTrim[®]



The water soluble combination

- ▶ 500 mg sulfadiazine and 100 mg trimethoprim/g
- ▶ Powder for use in drinking water/milk



HydroTrim®

500 mg sulfadiazine
and 100 mg trimethoprim/g



Solubility

- ▶ Homogeneity
 - Correct dosing of both active substances
 - Optimal synergistic effect
- ▶ Suitable for proportioners



Practical use

- ▶ Easy administration
- ▶ 24 h stability in drinking water
- ▶ High concentration: 60%
- ▶ Multi-species
- ▶ Resealable zipper bag



Palatability

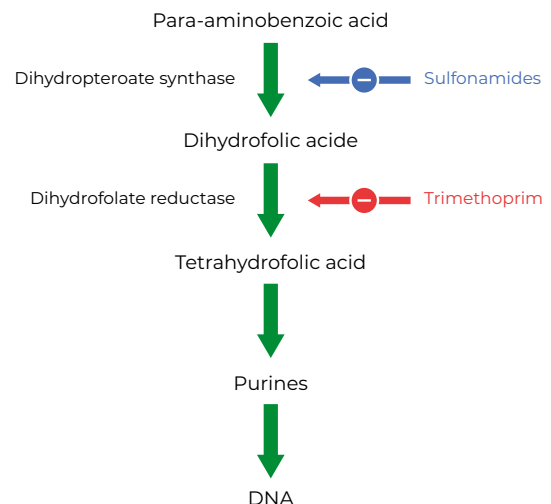
- ▶ Unaffected water intake



General characteristics

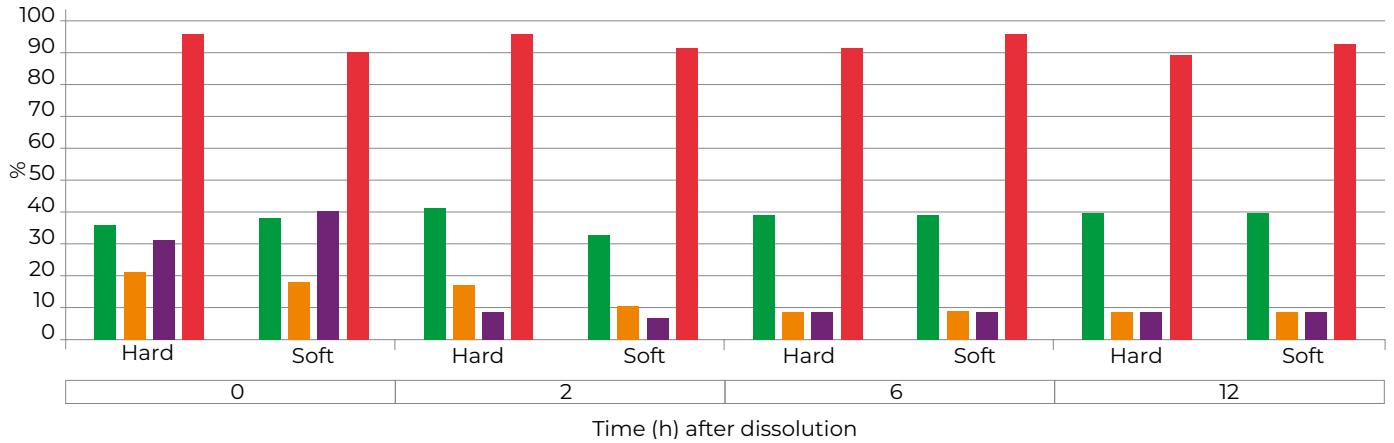
- ▶ Excellent activity
 - Broad-spectrum
 - Synergism
 - Bactericidal
- ▶ Fast clinical recovery
 - Fast absorption
 - High oral bio-availability: 80-90%
- ▶ Wide tissue distribution
- ▶ Time-dependent properties
- ▶ First line antimicrobial

▶ Sequential inhibition of folic acid synthesis



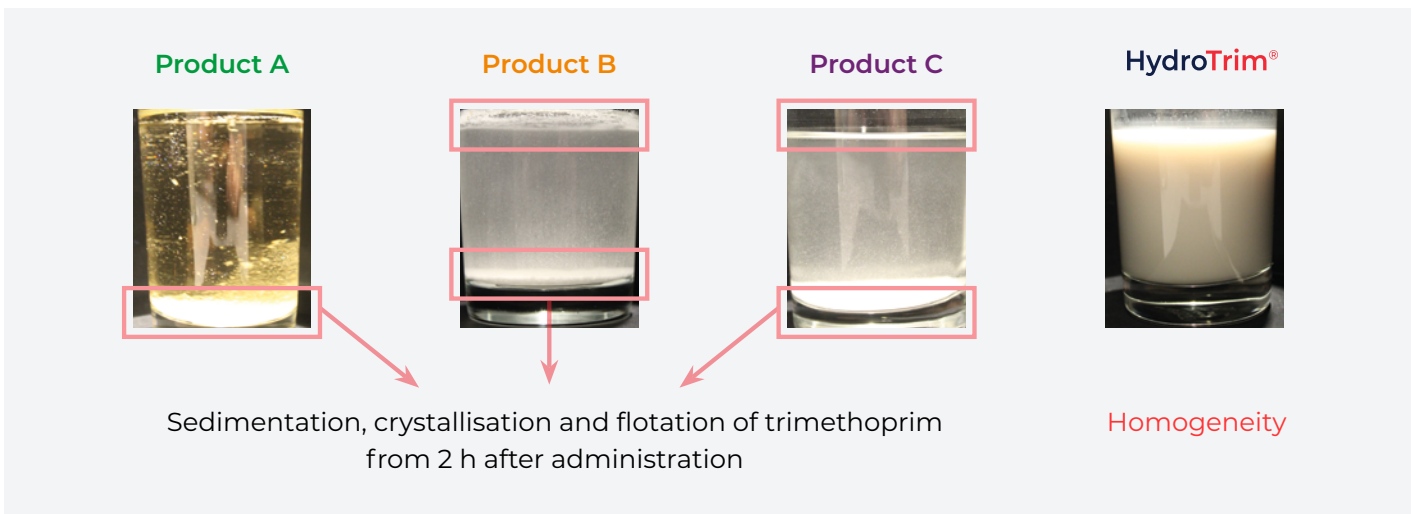
Assessment of four water soluble commercial products containing sulfadiazine and trimethoprim (ratio: 5 to 1) in highly concentrated stock solutions (portioners) with different water conditions.

Trimethoprim concentrations in drinking water



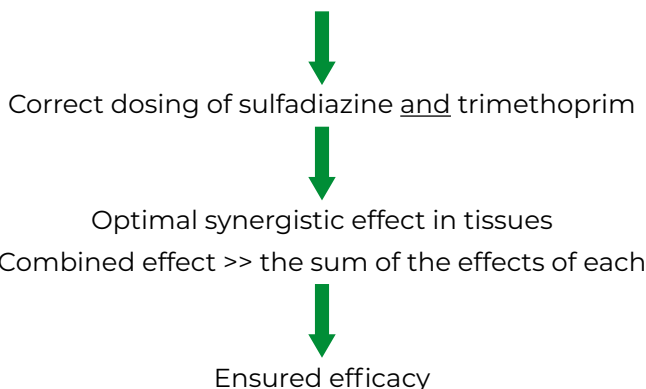
Product A: liquid 10% Product B: powder 60% Product C: powder 90% HydroTrim®: powder 60%

Figure 1. Trimethoprim concentrations expressed as a % of the theoretical concentration of 10 mg/ml, corresponding to 1 kg HydroTrim® per 10 l water. Samples were taken at different time points in hard and soft water (pH 8.02 and 6.18, respectively) at three levels in the vessels (top-middle-bottom).



Pictures: Visual observations 6 h after product administration in hard water.

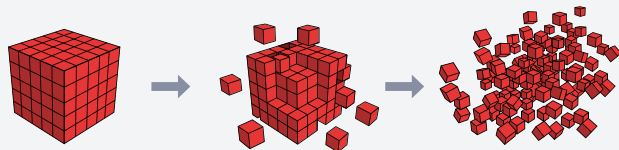
HydroTrim®: Perfect homogeneity, even in highly concentrated stock solutions



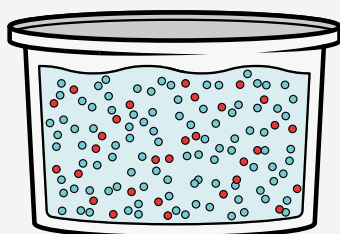
HydroTrim®

Advanced nanonization technology

Poorly soluble trimethoprim crystals are grinded into many small particles.



- ▶ Increased surface area
- ▶ Fast and complete dissolution of trimethoprim
- ▶ Homogeneity
- ▶ Suitable for proportioners

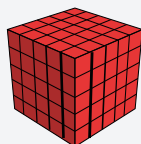


Scan the QR code
to learn more about
nanonization

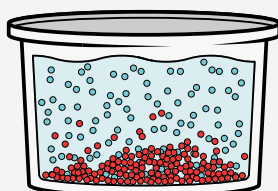


Standard formulations

Poorly soluble trimethoprim crystals



- ▶ Substantial sedimentation of trimethoprim
- ▶ Lack of homogeneity



Contraindications

Do not use in ruminating animals. Do not use in animals suffering from severe liver or kidney disease, oliguria or anuria. Do not use in cases of hypersensitivity to the active substance or to any of the excipients.

Special warnings

Severely diseased animals can have a decreased appetite and water consumption. If necessary, the concentration of the veterinary medicinal product in the drinking water should be adjusted to make sure that the recommended dosage is being consumed. Pigs, cattle (pre-ruminant calves) and sheep (pre-ruminant lambs): the uptake of medication by animals may be altered as a consequence of illness. In case of insufficient water uptake, animals should be treated parenterally instead, using a suitable injectable veterinary medicinal product prescribed by the veterinarian.

Special precautions for safe use in the target species

Due to the likely variabilities (time, geographical) in susceptibility of bacteria for potentiated sulfonamides, occurrence of resistance of bacteria may differ from country to country and even from farm to farm, and therefore bacteriological sampling and susceptibility testing are recommended. It is particularly of importance for *E. coli* infections where high percentages of resistance are observed. Use of the veterinary medicinal product should be based on identification and susceptibility testing of the target pathogen(s). If this is not possible, therapy should be based on epidemiological information and knowledge of susceptibility of the target pathogens at farm level, or at local/regional level. Use of the veterinary medicinal product deviating from the instructions given in the Summary of Product Characteristics (SPC) may increase the prevalence of bacteria resistant to sulfadiazine and trimethoprim and may also decrease the effectiveness of combinations of trimethoprim with other sulfonamides due to the potential for cross-resistance. Use of the veterinary medicinal product should be in accordance with official, national and regional antimicrobial policies. To avoid deterioration of the kidneys due to crystalluria during treatment, it should be ensured that the animal receives a sufficient amount of drinking water. This antimicrobial combination should only be used where diagnostic testing has indicated the need for simultaneous administration of each of the active substances.

Special precautions to be taken by the person administering the veterinary medicinal product to animals

This veterinary medicinal product contains sulfadiazine, trimethoprim and polysorbate 80, which can cause allergic reactions in some people. Hypersensitivity to sulfonamides may lead to cross reactions with other antibiotics. Allergic reactions to these substances may occasionally be serious. People with known hypersensitivity (allergy) to sulfonamides, trimethoprim or polysorbate should avoid contact with the veterinary medicinal product. Avoid skin and eye contact during preparation and administration. Wear personal protective equipment consisting of impervious (latex or nitrile) gloves (in compliance with Directive 89/686/EEC and EN374 norm), protective masks, eye protection and suitable protective clothing. In case of accidental contact with the eyes or skin, wash the affected area with plenty of water, and if skin rash occurs, seek medical advice immediately and show the package leaflet or the label to the physician. This veterinary medicinal product may be harmful if ingested. In case of accidental ingestion, seek medical advice immediately and show the package leaflet or the label to the physician. Wash hands after use.

Special precautions for the protection of the environment

Not applicable.

Adverse events

Chickens: Very rare (<1 animal / 10,000 animals treated, including isolated reports): Decreased drinking. Undetermined frequency: Hypersensitivity reactions. Cattle (pre-ruminant calves), sheep (pre-ruminant lambs) and pigs: Undetermined frequency: Hypersensitivity reactions

Use during pregnancy, lactation or lay

Do not use during pregnancy, lactation or lay. Laboratory studies in rats and rabbits have shown evidence of teratogenic and foetotoxic effects.

Interaction with other medicinal products and other forms of interaction

Do not administer concomitantly with coccidiostats or veterinary medicinal products containing sulfonamides. Do not associate with PABA (para-aminobenzoic acid). Sulfonamides potentiate anticoagulants action.

Symptoms of overdose (and where applicable, emergency procedures and antidotes)

Sulfonamides overdose causes renal toxicity. In this case, the administration of the veterinary medicinal product has to be stopped.

Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance

Not applicable.

Special precautions for the disposal of unused veterinary medicinal products or waste materials derived from the use of such products

Medicines should not be disposed of via wastewater or household waste. Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.



Practical use

- ▶ Easy administration → Time-saving
- ▶ 24 h stability in drinking water → Supports time-dependent properties
- ▶ High concentration: 60% → Small volumes
- ▶ Multi-species: Pigs, chickens, cattle, sheep → One product fits all
- ▶ Resealable zipper bag → Product stability

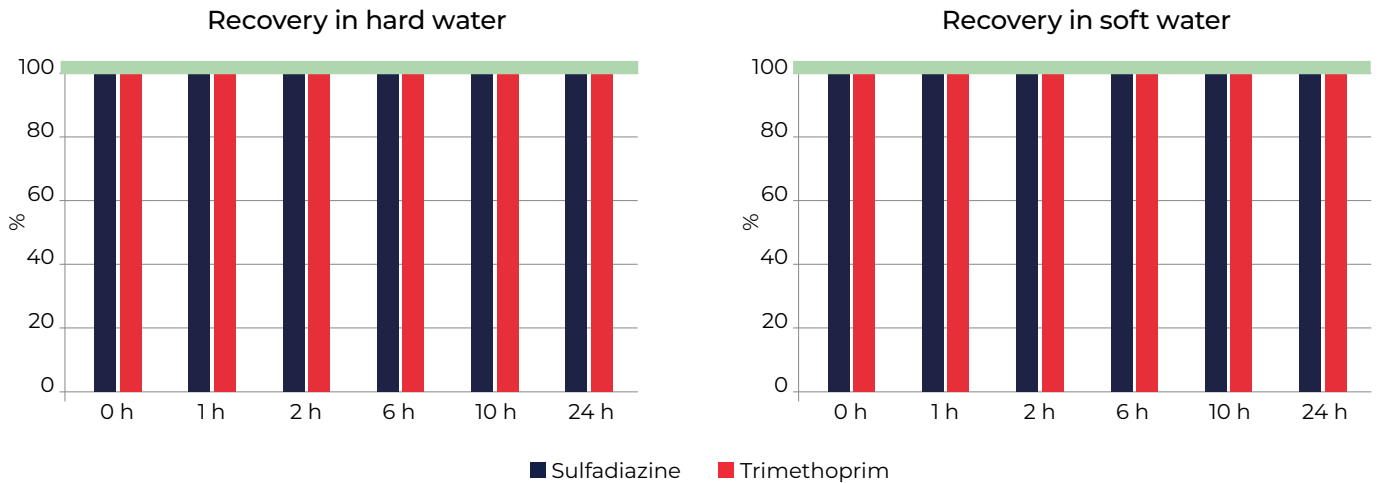


Figure 2. Recovery of sulfadiazine and trimethoprim expressed as a % of the theoretical content in hard and soft water (pH 8.14 and 5.82, respectively) at different time points after product administration.



Palatability

- ▶ Correct dosing
- ▶ Optimal and fast clinical recovery

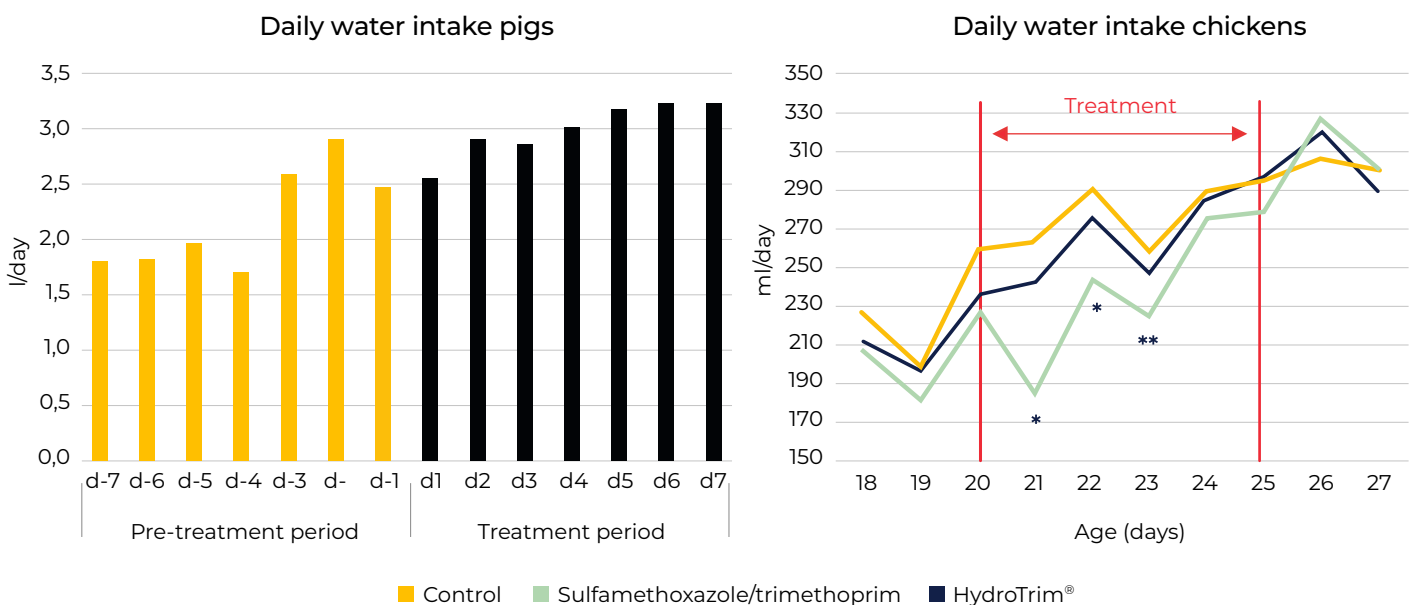


Figure 3. Daily water intake (l/day) in pigs 1 week before treatment and during 1 week of treatment with HydroTrim® (25 mg sulfadiazine and 5 mg trimethoprim/kg bodyweight/day, continuously).

Figure 4. Daily water intake (ml/day) in an untreated control group of broilers compared to two groups continuously treated for 5 days with HydroTrim® and a sulfamethoxazole/trimethoprim product at the registered daily dosages (*p < 0.001, **p = 0.002).

HydroTrim®

Composition

- ▶ 500 mg sulfadiazine and 100 mg trimethoprim/g = 60% formulation

Pharmaceutical form

- ▶ Powder for oral use in drinking water/milk (replacer)
- ▶ Off-white to light beige powder

Target species

- ▶ Pigs
- ▶ Chickens
- ▶ Cattle (pre-ruminant calves)
- ▶ Sheep (pre-ruminant lambs)

Indications

Treatment and metaphylaxis:

- ▶ **Pigs:** Respiratory infections caused by *Actinobacillus pleuropneumoniae* or *Pasteurella multocida*, and infections caused by *Streptococcus suis* or *Escherichia coli*
- ▶ **Chickens:** Collibacillosis caused by *Escherichia coli*
- ▶ **Cattle (pre-ruminant calves) and sheep (pre-ruminant lambs):** Respiratory infections caused by *Mannheimia haemolytica* or *Pasteurella multocida* and infections caused by *Escherichia coli*

Dosing and administration Withdrawal period

Meat and offal: 12 days (all species)
Not for use in birds producing or intended to produce eggs for human consumption.

Shelf life and storage

- ▶ Shelf life
 - as packaged for sale: 30 months
 - after first opening of the immediate packaging: 3 months
 - after dissolution in drinking water: 24 hours
 - after dissolution in milk replacer: 1 hour
- ▶ No special storage conditions

Packaging

1 kg resealable block-bottom zipped sachet made of polyethylene/aluminium/polyethylene terephthalate laminate and 100 g sachet.
Not all pack sizes may be marketed.



Species	HydroTrim®	Sulfadiazine	Trimethoprim	Administration		
	mg/kg bodyweight			Frequency	Route	Duration
Pigs, chickens	50	25	5	per day	drinking water	4 – 7 days
Pre-ruminant calves and lambs	25	12.5	2.5	every 12 h	milk (replacer)	

*References available upon request

*This brochure follows the authorised EU SPC

*Consult the local label

*Use medicines responsibly

*POM-V

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 **HUVEPHARMA®**