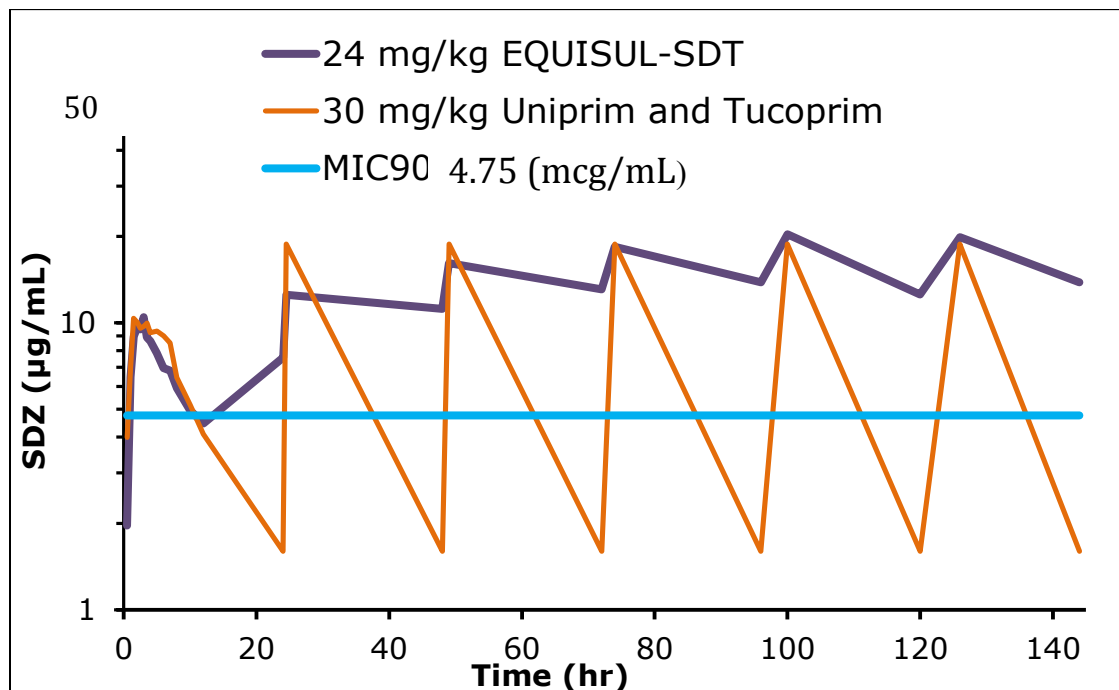


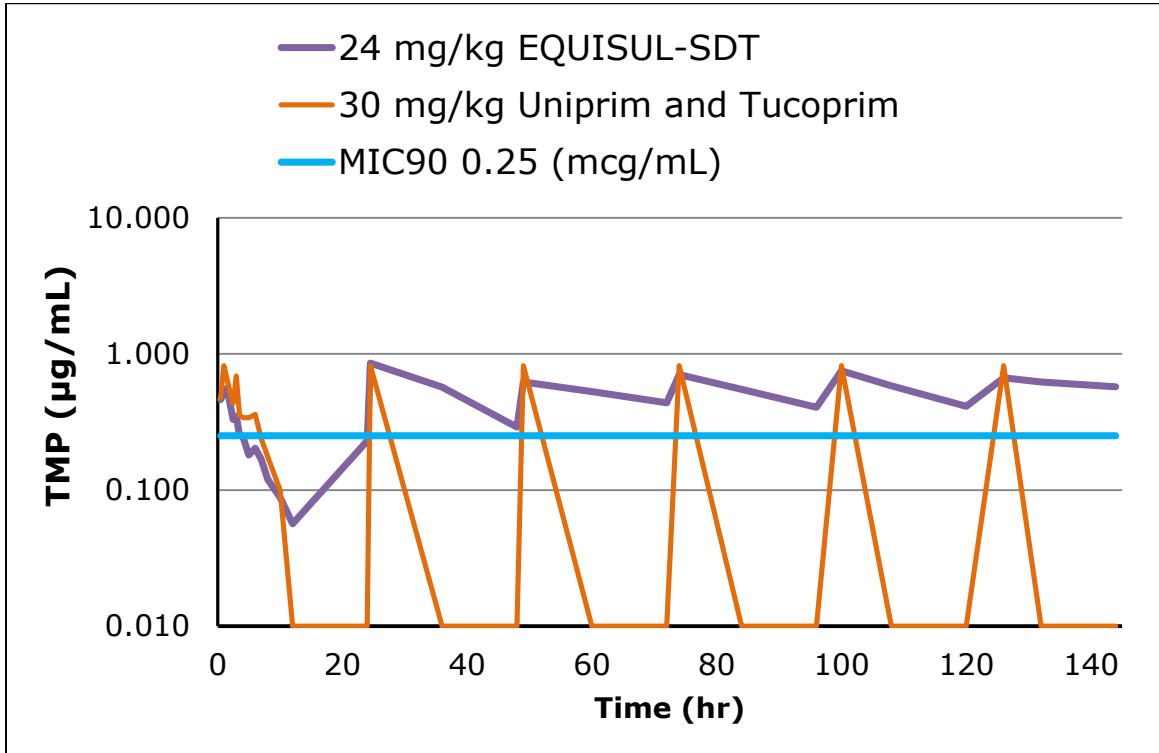
Product Features Comparison - EQUISUL-SDT®

Product	EQUISUL-SDT	Uniprim® and Tucoprim®
		Uniprim is a registered trademark of Macleod Pharmaceuticals and Tucoprim is a registered trademark of Pharmacia & Upjohn.
Dose	24mg/kg BID	30mg/kg SID (literature recommends BID)
Dosage Form	Liquid suspension	Powder
Administration	Direct Oral	Mix with Feed
Time over MIC ₉₀		
Sulfadiazine	24 hour (label dose)	12-14 hour (Single dose) ^{1,2}
Trimethoprim	24 hour (label dose)	6-8 hour (Single dose) ^{1,2}



The Uniprim and Tucoprim serum/plasma concentration data for 0-24 hours are taken from the product insert; subsequent days were projected assuming no accumulation.¹

Based on our pilot study of EQUISUL-SDT³ sulfadiazine plasma concentrations at steady state remain above the MIC₉₀ *S.equi* subsp. *zoepidemicus* for most of the dosing interval.



Label Claim	Lower Respiratory Disease caused by susceptible strains of <i>Streptococcus equi</i> subspecies <i>zooepidemicus</i>	Susceptible bacteria list - no specific claim
Type of drug	Bacteriostatic/bactericidal ^{4,5}	Bacteriostatic/bactericidal
Critical Therapeutic Parameter	Time over MIC	Time over MIC
Treatment Duration	10 days	5-7 days



Margin of

Safety study

30 days at 1X, 3X and 5X

No specific research done on the formulation

7 days based on Injectable data at up to 5X dose

21 days at label dose based on Injectable data⁶

The take home message for both the sulfadiazine and trimethoprim fractions are that rate of absorption and extent of absorption are important factors in how much drug reaches the lower intestinal tract. Small intestinal transit times in the horse are reported to be as short as 1 to 2 hours.⁷ They are also important in determining the minimum dose required to achieve therapeutic results. EQUISUL--SDT has been shown to achieve sustained therapeutic levels above MIC₉₀ at 20 percent less dose than other marketed products for label indication. EQUISUL- SDT is also the only currently marketed product with 30 days of continuous administration safety data for the marketed product at 1X, 3X and 5X doses.

The literature and Aurora's dose determination study clearly indicate the need to give Sulfadiazine/Trimethoprim twice daily orally.^{8,9} Once a day dosing will result in extended periods of both drug components being below the MIC₉₀ for the target organism which is not recommended for bacteriostatic drugs. This can increase the chances of treatment failures and developing resistance over time.

1. Uniprim and Tucoprim product inserts. T>MIC₉₀ values derived by interpolation from information in the product inserts.
2. Uniprim and Tucoprim product inserts. Average Serum/Plasma Concentration.
3. Study number 146013-E-11.0-2007. Aurora Pharmaceutical, LLC.
4. Potentiated Sulfonamides (Veterinary-Systemic). Monograph developed under the auspices of USP (available at www.aavpt.org <<http://www.aavpt.org>>).
5. Sulfonamides and Sulfonamide Combinations. The Merck Veterinary Manual Online (available at www.merckmanuals.com/vet <<http://www.merckmanuals.com/vet>>).
6. Uniprim and Tucoprim product inserts. Animal Safety.
7. <http://www.royal-horse.com/eng/your-horse/horse-nutrition/digestion.html>
8. Van Duijkeren E, Vulto AG, Van Miert AS. Trimethoprim/sulfonamide combinations in the horse: a review. J Vet Pharmacol Ther 1994 Feb; 17 (1): 64-73.
9. Foreman JH. Equine Respiratory Pharmacology. Vet Clin North Am Equine pract. 1999 Dec; 15(3): 665-86.