

# TIA™ 12.5% (tiamulin hydrogen fumarate) liquid concentrate



- Liquid concentrate for the treatment of swine dysentery associated with *Brachyspira* (formerly *Serpulina* or *Treponema*) *hyodysenteriae* and swine pneumonia due to *Actinobacillus pleuropneumoniae* susceptible to tiamulin
- For use in swine drinking water
- Must be diluted before administering

## Dosage/Administration:

Give TIA 12.5% liquid concentrate in water to pigs for five consecutive days, with targeted dose rates based on disease to be treated and animal weight. Use as the only source of drinking water for five days. TIA 12.5% liquid concentrate is a concentrated product that must be diluted prior to administration. Prepare fresh daily. One liter of TIA 12.5% liquid concentrate will medicate 550 gallons of drinking water at 227 mg per gallon for treatment of swine dysentery or 183 gallons at 681 mg per gallon for treatment of swine pneumonia. Increase or decrease dilution rate as required to obtain proper daily drug dose (see Prescribing Information for dosing guide). Withdraw medicated water 3 days before slaughter after treatment at 3.5 mg per pound body weight and 7 days before slaughter after treatment at 10.5 mg per pound body weight.

## Indications:

TIA 12.5% liquid concentrate, when administered in the drinking water for 5 consecutive days, is an effective antibiotic for the treatment of tiamulin-susceptible swine dysentery associated with *Brachyspira* (formerly *Serpulina* or *Treponema*) *hyodysenteriae* susceptible to tiamulin at a dose level of 3.5 mg tiamulin hydrogen fumarate per pound of body weight daily and for treatment of swine pneumonia due to *Actinobacillus pleuropneumoniae*, susceptible to tiamulin when given at 10.5 mg tiamulin hydrogen fumarate per pound of body weight daily.

## Contraindications:

Swine being treated with TIA 12.5% liquid concentrate should not have access to feeds containing polyether ionophores (e.g. monensin, lasalocid, narasin, salinomycin and semduramicin) as adverse reactions may occur.

## Key Features

- **Quick implementation.** Easy administration in water so you can react quickly and treat pigs as soon as a diagnosis is made.
- **Effective.** Helps overcome treatment delivery challenges because sick pigs are likely to continue drinking water when feed intake declines.<sup>1</sup>
- **Easily mixed.** For easy daily preparation of fresh solution.
- **Quickly absorbed.** Tiamulin can be found in pigs' bloodstream within 30 minutes after dosing.
- **Works where it's needed.** Achieves high tissue concentrations in the lungs, tonsils and intestinal tract lining – where bacteria invade.<sup>2</sup>

## Packaging

- 1-liter bottle
- 15 bottles / case

## Storage

Store at or below 25°C (77°F). Excursions permitted up to 40°C (104°F).

## Withdrawal

Withdraw medicated water 3 days before slaughter after treatment with 3.5 mg per pound body weight and 7 days before slaughter after treatment at 10.5 mg per pound body weight.

<sup>1</sup> Neumann, E.J.; Ramirez, A.; Schwartz, K.J. *Swine Disease Manual 5th Edition (2020)* American Association of Swine Veterinarians.

<sup>2</sup> Walter D, Knittel J, Schwartz K, et al. *Treatment and control of porcine proliferative enteropathy using different tiamulin delivery methods. J Swine Health Prod. 2001;9(3):109-115.*

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The labeling contains complete use information, including cautions and warnings. Always read, understand and follow the labeling and use directions. See the back page for use directions and additional information.



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## Brief Summary of Prescribing Information

Before using TIA 12.5% (tiamulin hydrogen fumarate) Liquid Concentrate consult the product insert, a summary of which follows:



# TIA™ 12.5% (tiamulin hydrogen fumarate) Liquid Concentrate

### Description:

TIA 12.5% (tiamulin hydrogen fumarate) Liquid Concentrate is a solution containing 12.5% tiamulin hydrogen fumarate (w/v) in an aqueous solution.

The active ingredient, tiamulin hydrogen fumarate, chemically is 14-desoxy-14-[(2-diethylaminoethyl) mercaptoacetoxy] mutilin hydrogen fumarate, a semi-synthetic diterpene antibiotic. TIA 12.5% Liquid Concentrate is for use only in preparing medicated drinking water for swine.

**Actions:** Tiamulin is active against *Brachyspira* (formerly *Serpulina* or *Treponema*) *hyodysenteriae* and *Actinobacillus pleuropneumoniae*. It is readily absorbed from the gut and can be found in the blood within 30 minutes after dosing.

**Indications:** TIA 12.5% (tiamulin hydrogen fumarate), when administered in the drinking water for five consecutive days, is an effective antibiotic for the treatment of swine dysentery associated with *Brachyspira* (formerly *Serpulina* or *Treponema*) *hyodysenteriae* susceptible to tiamulin at a dose level of 3.5 mg tiamulin hydrogen fumarate per pound of body weight daily and for treatment of swine pneumonia due to *Actinobacillus pleuropneumoniae* susceptible to tiamulin when given at 10.5 mg tiamulin hydrogen fumarate per pound of body weight daily.

**Contraindications:** Swine being treated with TIA 12.5% (tiamulin hydrogen fumarate) should not have access to feeds containing polyether ionophores (e.g. monensin, lasalocid, narasin, salinomycin and semduramicin) as adverse reactions may occur.

**Warning:** Keep out of reach of children. Avoid contact with skin. Direct contact with skin or mucous membranes may cause irritation.

**Residue Warnings:** Withdraw medicated water 3 days before slaughter after treatment at 3.5 mg per pound body weight and 7 days before slaughter after treatment at 10.5 mg per pound body weight.

### Caution: For use in drinking water of swine only – Not for use in humans.

Prepare fresh medicated water daily. Use as the only source of drinking water for 5 days. The effects of tiamulin on swine reproductive performance, pregnancy and lactation have not been determined.

**Adverse Reactions:** Overdoses of tiamulin hydrogen fumarate have sometimes produced transitory salivation, vomiting and an apparent calming effect on the pig. If signs of toxicity occur, discontinue use of medicated water and replace with clean, fresh water.

In rare cases, redness of the skin primarily over the ham and underline has been observed during medication. If these signs appear, discontinue use of this drug. Provide ample clean drinking water. Thoroughly rinse (hose down) the housing to remove urine and feces from animal contact surfaces or move the animals to clean pens. If the condition persists, consult your veterinarian.

Studies to evaluate the safety of the water soluble form of tiamulin in breeding swine have not been done.

To report suspected adverse drug events, for technical assistance or to obtain a copy of the Safety Data Sheet, contact Virbac AH, Inc. at 1-800-338-3659 or us.virbac.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or <http://www.fda.gov/reportanimalae>.

**Use Directions:** The concentration of tiamulin hydrogen fumarate in the drinking water must be adjusted to compensate for variation in water consumption due to weight or size of the pig, environmental temperature and other factors. It is important that pigs receive the proper drug dose, 3.5 mg tiamulin hydrogen fumarate per pound for swine dysentery or 10.5 mg tiamulin hydrogen fumarate per pound for swine pneumonia, each day for 5 consecutive days.

**Directions for preparing TIA 12.5% medicated solutions:** Determine the amount of TIA 12.5% (tiamulin hydrogen fumarate) Liquid Concentrate needed to medicate the desired volume of drinking water at the proper concentration. Carefully measure out this amount, add it to the water and stir to thoroughly mix.

### Number of pigs this bottle will treat for ONE day based on water consumption per pig

	One Liter
Net tiamulin hydrogen fumarate content:	125,000 mg

Diseases to be treated:	Swine Dysentery	Swine Pneumonia
	Daily tiamulin hydrogen fumarate required per pound body weight:	3.5 mg
Required treatment duration:	5 days	5 days

Pig Weight, lb	Water Intake, gal	# of Pigs	# of Pigs
20	0.3 – 0.5	1,786	595
45	0.4 – 1.1	794	265
75	0.7 – 1.5	476	159
125	1.0 – 2.0	286	95
180	1.2 – 3.0	198	66

Suggested final dilution of:	1 bottle (1 Liter)	550 gal	183 gal
	3 bottles (3 Liters)	1650 gal	550 gal
	½ bottle (0.5 Liters)	275 gal	92 gal

Tiamulin hydrogen fumarate concentration per gallon at suggested final dilution*	227 mg (60 ppm)	681 mg (180 ppm)
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1. Prepare fresh medicated drinking water every day for the 5 day treatment period.

2. Water medicated with TIA 12.5% (tiamulin hydrogen fumarate) should be the only source of drinking water during the treatment period.

\*3. Increase or decrease dilution rate as required to obtain proper daily drug dose.

### Directions for using TIA 12.5%

**In medicated proportioners:** One liter of TIA 12.5% Liquid Concentrate mixed with water to make 4.3 gallons of stock solution and this stock solution metered at one fluid ounce per gallon will provide 227 mg of tiamulin hydrogen fumarate per gallon to 550 gallons of drinking water for treatment of swine dysentery. Three liters of TIA 12.5% Liquid Concentrate mixed with water to make 4.3 gallons of stock solution and this stock solution metered at one fluid ounce per gallon will provide 681 mg tiamulin hydrogen fumarate per gallon to a total of 550 gallons of drinking water for treatment of swine pneumonia.

**In barrels or tanks:** One liter (1000 mL) of TIA 12.5% (tiamulin hydrogen fumarate) Liquid Concentrate will medicate 550 gallons of drinking water at 227 mg per gallon for treatment of swine dysentery or 183 gallons at 681 mg per gallon for treatment of swine pneumonia.

Measure TIA 12.5% Liquid Concentrate carefully, pour into the proper amount of water and thoroughly mix. The concentration of tiamulin hydrogen fumarate in the stock solution and in the drinking water delivered must be adjusted to compensate for variation in water consumption by pigs due to body weight, environmental and other factors. It is important that the pigs receive the proper drug dose of 3.5 mg of tiamulin hydrogen fumarate per pound of body weight daily for 5 consecutive days for treatment of swine dysentery or a dose of 10.5 mg per pound body weight daily for 5 consecutive days for treatment of swine pneumonia.

**Attention:** If no response to treatment is obtained within 5 days re-establish the diagnosis. Failure of response may be related to the presence of non-susceptible organisms of other complicating disease conditions. Because of the tendency for the disease to recur on premises with a history of swine dysentery or with swine pneumonia, a control program should be implemented after treatment. Drugs are not substitutes for proper sanitary measures or good management, but should be used in conjunction with such practices.

### How Supplied:

Container Size	Active Ingredients
1 Liter bottle (33.8 fl oz; 1000 mL)	12.5% (125.0 g) Tiamulin hydrogen fumarate

Store at or below 25°C (77°F). Excursions permitted up to 40°C (104°F). **Observe expiration date.**

### Restricted Drug (California): Use only as directed

Approved by FDA under ANADA # 200-695

Manufactured by: Virbac AH, Inc  
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