

CLINDACURE- clindamycin liquid
Vedco, Inc.

ClindaCure®
(clindamycin hydrochloride oral solution)

Oral Solution

Caution: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

DESCRIPTION

ClindaCure oral solution contains clindamycin hydrochloride which is the hydrated salt of clindamycin. Clindamycin is a semisynthetic antibiotic produced by a 7(S)-chlorosubstitution of the 7(R)-hydroxyl group of a naturally produced antibiotic produced by *Streptomyces lincolnensis* var. *lincolnensis*.

ClindaCure oral solution (For Use in Dogs and Cats) is a palatable formulation intended for oral administration. Each mL of ClindaCure oral solution contains clindamycin hydrochloride equivalent to 25 mg clindamycin; and ethyl alcohol, 8.64%.

ACTIONS

Site and Mode of Action: Clindamycin is an inhibitor of protein synthesis in the bacterial cell. The site of binding appears to be in the 50S sub-unit of the ribosome. Binding occurs to the soluble RNA fraction of certain ribosomes, thereby inhibiting the binding of amino acids to those ribosomes. Clindamycin differs from cell wall inhibitors in that it causes irreversible modification of the protein-synthesizing subcellular elements at ribosomal level.

MICROBIOLOGY

Clindamycin is a lincosaminide antimicrobial agent with activity against a wide variety of aerobic and anaerobic bacterial pathogens. Clindamycin is a bacteriostatic compound that inhibits bacterial protein synthesis by binding to the 50S ribosomal sub-unit. The minimum inhibitory concentrations (MICs) of Gram-positive and obligate anaerobic pathogens isolated from dogs and cats in the United States are presented in Table 1 and Table 2. Bacteria were isolated in 1998-1999. All MICs were performed in accordance with the National Committee for Clinical Laboratory Standards (NCCLS).

Table 1. Clindamycin MIC Values (µg/mL) from Diagnostic Laboratory Survey Data Evaluating Canine Pathogens in the U.S. during 1998-99¹

Organism	Number of Isolates	MIC₅₀	MIC₈₅
MIC₉₀	Range		
<u>Soft Tissues/Wound²</u>			
<i>Staphylococcus</i>	17	0.5	0.5
0.25-≥4.0			≥4.0
<i>aureus</i>			
<i>Staphylococcus</i>	28	0.25	
0.5	≥4.0	0.125-≥4.0	

intermedius

Staphylococcus 18 0.5
0.5 ≥ 4.0 0.25- ≥ 4.0

spp.

Beta-hemolytic 46 0.5
0.5 ≥ 4.0 0.25- ≥ 4.0

streptococci

Streptococcus 11 0.5 ≥ 4.0 ≥ 4.0
0.25- ≥ 4.0

spp.

Osteomyelitis/Bone³

Staphylococcus 20 0.5 0.5
0.5 0.5⁴

aureus

Staphylococcus 15
0.5 ≥ 4.0 ≥ 4.0 0.25- ≥ 4.0

intermedius

Staphylococcus 18 0.5
 ≥ 4.0 ≥ 4.0 0.25- ≥ 4.0

spp.

Beta-hemolytic 21 0.5 2.0
2.0 0.25- ≥ 4.0

streptococci

Streptococcus 21 ≥ 4.0 ≥ 4.0 ≥ 4.0 0.25- ≥ 4.0
21 ≥ 4.0 ≥ 4.0 ≥ 4.0 0.25- ≥ 4.0

spp.

Dermal/Skin⁵

Staphylococcus 25 0.5 ≥ 4.0 ≥ 4.0
0.25- ≥ 4.0

aureus

Staphylococcus 48
0.5 ≥ 4.0 ≥ 4.0 0.125- ≥ 4.0

intermedius

Staphylococcus 32 0.5 ≥ 4.0 ≥ 4.0
0.25- ≥ 4.0

spp.

Beta-hemolytic

17 0.5 0.5 0.5 0.25-0.5

¹ The correlation between the *in vitro* susceptibility data and clinical response has not been determined.

² Soft Tissue/Wound: Includes samples labeled wound, abscess, aspirate, exudates, draining tract, lesion, and mass.

³ Osteomyelitis/Bone: Includes samples labeled bone, fracture, joint, tendon.

⁴ No range, all isolates yielded the same value.

⁵ Dermal/Skin: includes samples labeled skin, skin swab, biopsy, incision, lip.

Table 2. Clindamycin MIC Values (µg/mL) from Diagnostic Laboratory Survey Data Evaluating Feline Pathogens from Wound and Abscess Samples in the U.S. during 1998¹

Organism MIC ₅₀	Number of Isolates	
	MIC ₉₀	Range
<i>Bacteriodes/</i> 4.0	30 ≤0.015-4.0	0.06
<i>Prevotella</i>		
<i>Fusobacterium</i> spp. 0.25	17 ≤0.015-0.5	0.25
<i>Peptostreptococcus</i> 0.5	18 ≤0.015-8.0	0.13
spp.		
<i>Porphyromonas</i> spp. 0.06	13 0.25	≤0.015-8.0

¹ The correlation between the *in vitro* susceptibility data and clinical response has not been determined.

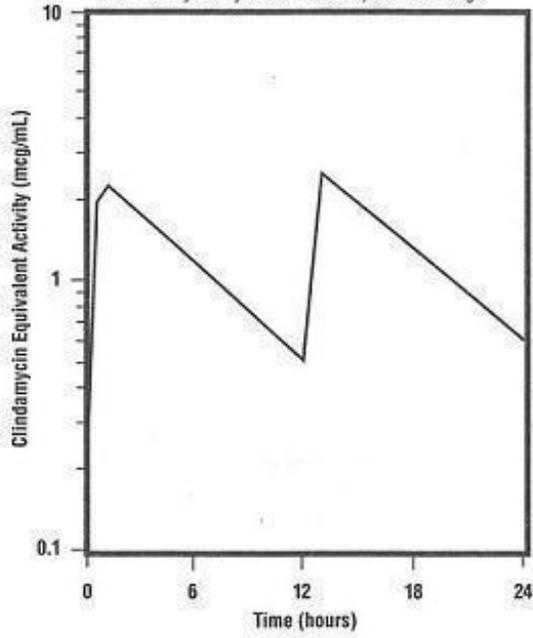
PHARMACOLOGY

Absorption: Clindamycin hydrochloride is rapidly absorbed from the canine and feline gastrointestinal tract.

Dog Serum Levels:

Serum levels at or above 0.5 µg/mL can be maintained by oral dosing at a rate of 2.5 mg/lb of clindamycin hydrochloride every 12 hours. This same study revealed that average peak serum concentrations of clindamycin occur 1 hour and 15 minutes after oral dosing. The elimination half-life for clindamycin in dog serum was approximately 5 hours. There was no bioactivity accumulation after a regimen of multiple oral doses in healthy dogs.

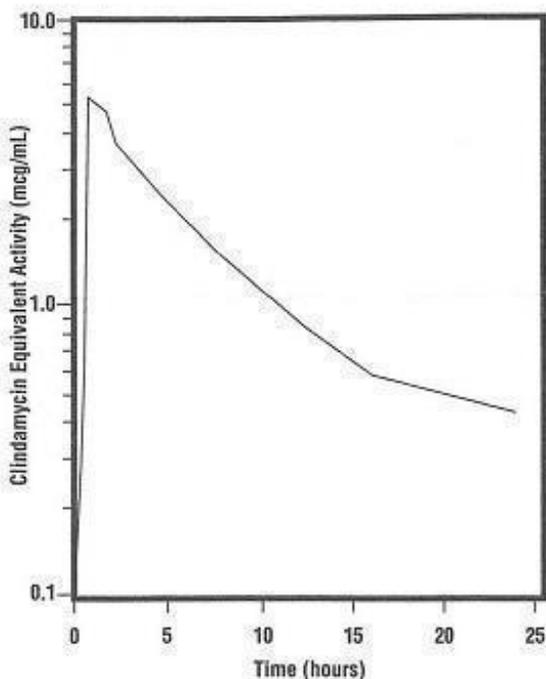
Clindamycin Serum Concentrations
2.5 mg/lb (5.5 mg/kg) After B.I.D. Oral Dose
of Clindamycin Hydrochloride Capsules to Dogs



Cat Serum Levels:

Serum levels at or above 0.5 $\mu\text{g/mL}$ can be maintained by oral dosing at a rate of 5 mg/lb of clindamycin hydrochloride liquid every 24 hours. The average peak serum concentration of clindamycin occurs approximately 1 hour after oral dosing. The elimination half-life of clindamycin in feline serum is approximately 7.5 hours. In healthy cats, minimal accumulation occurs after multiple oral doses of clindamycin hydrochloride, and steady-state should be achieved by the third dose.

Clindamycin Serum Concentrations
5 mg/lb (11 mg/kg) After Single Oral Dose
of Clindamycin Hydrochloride Liquid to Cats



METABOLISM AND EXCRETION

Extensive studies of the metabolism and excretion of clindamycin hydrochloride administered orally in animals and humans have shown that unchanged drug and bioactive and bioinactive metabolites are excreted in urine and feces. Almost all of the bioactivity detected in serum after ClindaCure oral solution is due to the parent molecule (clindamycin). Urine bioactivity, however, reflects a mixture of clindamycin and active metabolites, especially N-demethyl clindamycin and clindamycin sulfoxide.

ANIMAL SAFETY SUMMARY

Rat and Dog Data:

One year oral toxicity studies in rats and dogs at doses of 30, 100 and 300 mg/kg/day (13.6, 45.5 and 136.4 mg/lb/day) have shown clindamycin hydrochloride capsules to be well tolerated. Differences did not occur in the parameters evaluated to assess toxicity when comparing groups of treated animals with contemporary controls. Rats administered clindamycin hydrochloride at 600 mg/kg/day (272.7 mg/lb/day) for six months tolerated the drug well; however, dogs orally dosed at 600 mg/kg/day (272.7 mg/lb/day) vomited, had anorexia, and subsequently lost weight. At necropsy these dogs had erosive gastritis and focal areas of necrosis of the mucosa of the gallbladder.

Safety in gestating bitches or breeding males has not been established.

Cat Data:

The recommended daily therapeutic dose range for clindamycin hydrochloride (ClindaCure oral solution) is 11 to 33 mg/kg/day (5 to 15 mg/lb/day) depending on the severity of the condition. ClindaCure oral solution was tolerated with little evidence of toxicity in domestic shorthair cats when administered orally at 10X the minimum recommended therapeutic daily dose (11 mg/kg; 5 mg/lb) for 15 days, and at doses up to 5x the minimum recommended therapeutic dose for 42 days. Gastrointestinal tract upset (soft feces to diarrhea) occurred in control and treated cats with emesis occurring at doses 3x or greater than the minimum recommended therapeutic dose (11 mg/kg/day; 5 mg/lb/day). Lymphocytic inflammation of the gallbladder was noted in a greater number of treated cats at the 110 mg/kg/day (50 mg/lb/day) dose level than for control cats. No other effects were noted. Safety in gestating queens or breeding male cats has not been established.

INDICATIONS

ClindaCure oral solution (for use in dogs and cats) is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the specific conditions listed below:

Dogs: Skin infections (wounds and abscesses) due to coagulase positive staphylococci (*Staphylococcus aureus* or *Staphylococcus intermedius*). **Deep wounds and abscesses** due to *Bacteroides fragilis*, *Prevotella melaninogenicus*, *Fusobacterium necrophorum* and *Clostridium perfringens*. **Dental infections** due to *Staphylococcus aureus*, *Bacteroides fragilis*, *Prevotella melaninogenicus*, *Fusobacterium necrophorum* and *Clostridium perfringens*. **Osteomyelitis** due to *Staphylococcus aureus*, *Bacteroides fragilis*, *Prevotella melaninogenicus*, *Fusobacterium necrophorum* and *Clostridium perfringens*.

Cats: Skin infections (wounds and abscesses) due to *Staphylococcus aureus*, *Staphylococcus intermedius*, *Streptococcus* spp. **Deep wounds and abscesses** due to *Clostridium perfringens* and *Bacteroides fragilis*. **Dental infections** due to *Staphylococcus aureus*, *Staphylococcus intermedius*, *Streptococcus* spp., *Clostridium*

perfringens and *Bacteroides fragilis*.

CONTRAINDICATIONS

ClindaCure oral solution is contraindicated in animals with a history of hypersensitivity to preparations containing clindamycin or lincomycin.

Because of potential adverse gastrointestinal effects, do not administer to rabbits, hamsters, guinea pigs, horses, chinchillas or ruminating animals.

HUMAN WARNINGS

Keep out of reach of children. Not for use in humans.

PRECAUTIONS

During prolonged therapy of one month or greater, periodic liver and kidney function tests and blood counts should be performed.

The use of ClindaCure oral solution occasionally results in overgrowth of non-susceptible organisms such as clostridia and yeasts. Therefore, the administration of ClindaCure oral solution should be avoided in those species sensitive to the gastrointestinal effects of clindamycin (see **CONTRAINDICATIONS**). Should superinfections occur, appropriate measures should be taken as indicated by the clinical situation. Patients with very severe renal disease and/or very severe hepatic disease accompanied by severe metabolic aberrations should be dosed with caution, and serum clindamycin levels monitored during high-dose therapy.

Clindamycin hydrochloride has been shown to have neuromuscular blocking properties that may enhance the action of other neuromuscular blocking agents. Therefore, ClindaCure oral solution should be used with caution in animals receiving such agents.

Safety in gestating bitches and queens or breeding male dogs and cats has not been established.

ADVERSE REACTIONS

Side effects occasionally observed in either clinical trials or during clinical use were vomiting and diarrhea.

The Safety Data Sheet (SDS) contains more detailed occupational safety information. To report suspected adverse drug events, for technical assistance or to obtain a copy of the SDS, contact Bimeda, Inc. 1-888-524-6332. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at www.fda.gov/reportanimalae.

DOSAGE AND ADMINISTRATION

Dogs:

Infected Wounds, Abscesses, and Dental Infections

Oral: 2.5-15.0 mg/lb body weight every 12 hours.

Duration: Treatment with ClindaCure oral solution may be continued up to a maximum of 28 days if clinical judgment indicates. Treatment of acute infections should not be continued for more than three or four days if no response to therapy is seen.

Dosage Schedule: ClindaCure oral solution, administer 1-6 mL/10 lbs body weight every 12 hours.

Dogs:

Osteomyelitis

Oral: 5.0-15.0 mg/lb body weight every 12 hours.

Duration: Treatment with ClindaCure oral solution is recommended for a minimum of 28 days. Treatment should not be continued for longer than 28 days if no response to therapy is seen.

Dosage Schedule: ClindaCure oral solution, administer 2-6 mL/10 lbs body weight every 12 hours.

Cats:**Infected Wounds, Abscesses, and Dental Infections**

Oral: 5.0 - 15.0 mg/lb body weight once every 24 hours depending on the severity of the condition.

Duration: Treatment with ClindaCure oral solution may be continued up to a maximum of 14 days if clinical judgment indicates. Treatment of acute infections should not be continued for more than three to four days if no clinical response to therapy is seen.

Dosage Schedule: ClindaCure oral solution, to provide 5.0 mg/lb, administer 1 mL/5 lbs body weight once every 24 hours; to provide 15.0 mg/lb, administer 3 mL/5 lbs body weight once every 24 hours.

HOW SUPPLIED

ClindaCure oral solution is available as 20 mL filled in 30 mL bottles (25 mg/mL) supplied in packers containing 12 cartoned bottles with direction labels and calibrated dosing droppers.

Store at 20°C - 25°C (68°F - 77°F) [see USP].

Approved by FDA under ANADA # 200-538

Manufactured by:

Bimeda, Inc.

Le Sueur, MN 56058

www.bimeda.com

Distributed by:

VEDCO, INC.

St. Joseph, MO 64507

www.vedco.com

ClindaCure® is a registered trademark of Vedco, Inc.

Approved for use in dogs and cats.

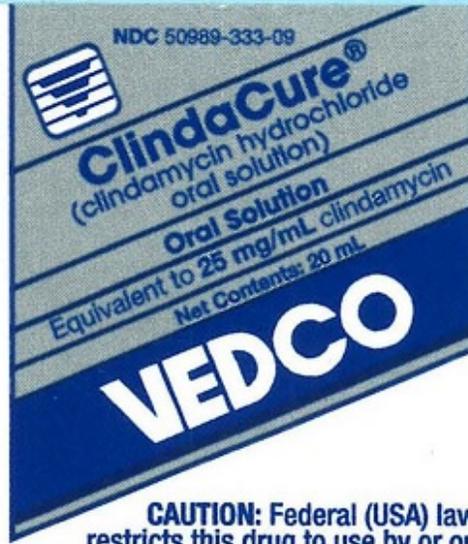
Recommended dog dosage: For therapy of wounds, abscesses and dental infections, orally administer 2.5 - 15.0 mg/lb (1 - 6 mL/10 lbs) body weight every 12 hours. For therapy of osteomyelitis orally administer 5.0 - 15.0 mg/lb (2-6 mL/10 lbs) body weight every 12 hours.

Recommended cat dosage: For therapy of wounds, abscesses and dental infections, orally administer 1 - 3 mL/5 lbs body weight once every 24 hours depending on the severity of the condition.

Each mL contains: Clindamycin hydrochloride equivalent to clindamycin 25 mg; and ethyl alcohol, 8.64%.

See package insert for complete product information.

Warning-Keep out of reach of children. Not for human use.



CAUTION: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

For Use in Animals Only

Approved by FDA under ANADA # 200-538

Store at 20°C - 25°C (68°F - 77°F),
[see USP].

1CL1008 8CL1010 Rev 07/22

Distributed by
Vedco, Inc.
St. Joseph, MO 64507
www.vedco.com

LOT/EXP:

CLINDACURE

clindamycin liquid

Product Information

Product Type	PRESCRIPTION ANIMAL DRUG	Item Code (Source)	NDC:50989-333
Route of Administration	ORAL		

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
CLINDAMYCIN HYDROCHLORIDE (UNII: T20OQ1YN1W) (CLINDAMYCIN - UNII:3U02EL437C)	CLINDAMYCIN	25 mg in 1 mL

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:50989-333-09	20 mL in 1 CARTON		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANADA	ANADA200538	09/10/2020	

Labeler - Vedco, Inc. (021634266)

Registrant - Bimeda, Inc. (060492923)**Establishment**

Name	Address	ID/FEI	Business Operations
Bimeda, Inc.		060492923	manufacture

Revised: 11/2023

Vedco, Inc.