Date of Approval: June 24, 2005

FREEDOM OF INFORMATION SUMMARY

ORIGINAL ABBREVIATED NEW ANIMAL DRUG APPLICATION

ANADA 200-360

Tiamulin Liquid Concentrate
(12.3% tiamulin hydrogen fumarate)

Swine

For oral use in the treatment of swine dysentery and pneumonia

Sponsored by:

Phoenix Scientific, Inc.

FREEDOM OF INFORMATION SUMMARY

1. GENERAL INFORMATION:

a. File Number:	ANADA 200-360
b. Sponsor:	Phoenix Scientific, Inc. 3915 South 48th Street Ter. St. Joseph, MO 64503 Drug Labeler Code: 059130
c. Established Names:	Tiamulin hydrogen fumarate
d. Proprietary Name:	Tiamulin Liquid Concentrate
e. Dosage Form:	Liquid
f. How Supplied:	32 fl oz bottles
g. How Dispensed:	OTC
h. Amount of Active Ingredients:	12.3% tiamulin hydrogen fumarate
i. Route of Administration:	Oral
j. Species/Class:	Swine/Weighing less than 250 pounds.
k. Recommended Dosage:	Administered in the drinking water for five consecutive days for the treatment of swine dysentery associated with *Brachyspira 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.
l. Pharmacological Category:	Antibiotic
m. Indications:	For the treatment of swine dysentery associated with *Brachyspira hyodysenteriae* and swine pneumonia due to *Actinobacillus pleuropneumoniae* susceptible to tiamulin.
n. Pioneer Product:	DENAGARD Liquid Concentrate; tiamulin; NADA 140-916; Boehringer Ingelheim Vetmedica, Inc.

2. TARGET ANIMAL SAFETY AND DRUG EFFECTIVENESS:

Under the provisions of the Federal Food, Drug, and Cosmetic Act, as amended by the Generic Animal Drug and Patent Term Restoration Act (GADPTRA) of 1988, an Abbreviated New Animal Drug Application (ANADA) may be submitted for a generic version of an approved new animal drug (pioneer product). New target animal safety and effectiveness data and human food safety data (other than tissue residue data) are not required for approval of an ANADA.

Ordinarily, the ANADA sponsor shows the generic product is bioequivalent to the pioneer, which has been shown to be safe and effective. If bioequivalence is demonstrated through a clinical endpoint study, then a tissue residue study to establish the withdrawal time for the generic product should also be conducted. For certain dosage forms, the agency will grant a waiver from the requirement of an *in vivo* bioequivalence study. (55 FR 24645, June 18, 1990; Fifth GADPTRA Policy Letter; Bioequivalence Guidance, revised October 9, 2002).

Based on the formulation characteristics of the generic product Phoenix Scientific, Inc. was granted a waiver from the requirement of an *in vivo* bioequivalence study for Tiamulin (tiamulin hydrogen fumarate) Liquid Concentrate. The generic product is administered as an oral solution, contains similar active ingredients in the same concentration and dosage form as the pioneer product, and contains no inactive ingredients that may significantly affect the absorption of the active ingredient. The pioneer product DENAGARD (tiamulin hydrogen fumarate) Liquid Concentrate, the subject of Boehringer Ingelheim Vetmedica, Inc., NADA 140-916, was approved on January 29 1993.

3. HUMAN SAFETY:

- **Tolerance for Residues:**

  The tolerances established for the pioneer product apply to the generic product. A tolerance of 0.6 ppm is established for 8-*alpha*-hydroxymutilin (marker compound) in liver (target tissue) of swine under 21 CFR 556.738.

- **Withdrawal Times:**

  Because a waiver of the *in vivo* bioequivalence study was granted, the withdrawal times are those previously assigned to the pioneer product.

  The withdrawal times established for tiamulin liquid concentrate under 21 CFR 520.2456 are: 1) 3 days before slaughter when given to swine at a dose of 3.5 mg of tiamulin per pound of body weight for 5 days, and 2) 7 days before slaughter when given to swine at a dose of 10.5 mg per pound of body weight for 5 days.

- **Regulatory Method for Residues:**

  The determinative analytical method (GC) and the confirmatory analytical method (GC-MS) for determining 8-*alpha*-hydroxymutilin in swine liver are on file at the Center for Veterinary Medicine, FDA, 7500 Standish Place, Rockville, MD 20855.

4. AGENCY CONCLUSIONS:

This Abbreviated New Animal Drug Application (ANADA) filed under section 512(b)(2) of the Federal Food, Drug, and Cosmetic Act satisfies the requirements of section 512(n) of the act and demonstrates that Tiamulin Liquid Concentrate, when used under its proposed conditions of use, is safe and effective for its labeled indications.

5. ATTACHMENTS:

Facsimile generic labeling and currently approved pioneer labeling are attached as follows:

Generic Labeling for ANADA 200-360:
Tiamulin (tiamulin) Liquid Concentrate
Container Label – one quart (32 fl oz; 946 mL)
Package Insert

Pioneer Labeling for NADA 140-916:
DENAGARD (tiamulin) Liquid Concentrate
Container Label – one quart (32 fl oz; 946 mL)
Package Insert