Approval Date: June 24, 2002

FREEDOM OF INFORMATION SUMMARY

ORIGINAL ABBREVIATED NEW ANIMAL DRUG APPLICATION

ANADA 200-208

Lasalocid (AVATEC®) plus Roxarsone (3-NITRO®) plus Bacitracin Zinc (ALBAC®)

1) For the prevention of coccidiosis caused by *Eimeria tenella, E. necatrix, E. acervulina, E. brunetti, E. mivati,* and *E. maxima*; as an aid in the reduction of lesions due to *E. tenella;* and for increased rate of weight gain in broiler chickens only.

2) For the prevention of coccidiosis caused by *Eimeria tenella, E. necatrix, E. acervulina, E. brunetti, E. mivati,* and *E. maxima*; as an aid in the reduction of lesions due to *E. tenella;* and for improved feed efficiency in broiler chickens only.

Sponsored by:

Alpharma, Inc.
One Executive Drive
Fort Lee, New Jersey 07024

FREEDOM OF INFORMATION SUMMARY

Combined use of AVATEC®, 3-NITRO® and ALBAC® in Broiler Chicken Feeds

I. GENERAL INFORMATION

a. File Number: ANADA 200-208

b. Sponsor:
Alpharma, Inc.
One Executive Drive
Fort Lee, New Jersey 07024
Drug Labeler Code: 046573

c. Established Names:
Lasalocid
Roxarsone
Bacitracin zinc

d. Propriety Names:
AVATEC®
3-NITRO®
ALBAC®

e. Dosage Form: Type A Medicated Articles as per 21 CFR 558.311 for lasalocid, 21 CFR 558.530 for roxarsone, and 21 CFR 558.78 for bacitracin zinc. This ANADA provides for the combined use of three approved Type A medicated articles in Type C medicated feeds, rather than a premix incorporating these three compounds.

f. How Supplied:
AVATEC® 50 lb. bags
3-NITRO® 50 lb. bags
ALBAC® 50 lb. bags

g. How Dispensed: OTC

h. Amount of Active Ingredients:
Lasalocid: 3.0, 3.3, 3.8, 4.0, 4.3, 4.4, 5.0, 5.1, 5.5, 5.7, 6.0, 6.3, 6.7, 7.2, 7.5, 8.0, 8.3, 10.0, 12.5, 15, 20 or 50 percent lasalocid activity.
Roxarsone: 10, 20, 50, or 80 percent roxarsone activity
Bacitracin zinc: 50 grams of bacitracin activity per pound.

i. Route of Administration: Oral, via the feed.

j. Species/Class: Broiler chickens

k. Recommended Dosage: Lasalocid 68 (0.0075 pct) to 113 (0.0125 pct) g/ton
Roxarsone 45.4 g/ton
Bacitracin zinc 1) 10 g/ton for increased rate of weight gain, and 2) 30 g/ton for improved feed efficiency

l. Pharmacological Category: Anticoccidial + arsenical + antibacterial

m. Indications: 1) For the prevention of coccidiosis caused by *Eimeria tenella, E. necatrix, E. acervulina, E. brunetti, E. mivati,* and *E. maxima*; as an aid in the reduction of lesions due to *E. tenella;* and for increased rate of weight gain in broiler chickens only.

2) For the prevention of coccidiosis caused by *Eimeria tenella, E. necatrix, E. acervulina, E. brunetti, E. mivati,* and *E. maxima*; as an aid in the reduction of lesions due to *E. tenella;* and for improved feed efficiency in broiler chickens only.

n. Pioneer Product: AVATEC®
Lasalocid
NADA 96-298
Alpharma Inc.

3-NITRO®
Roxarsone
NADA 7-981
Alpharma Inc.

BACIFERM®
Bacitracin zinc
NADA 46-920
Alpharma Inc.

AVATEC® + 3-NITRO® + BACIFERM®
Lasalocid + Roxarsone + Bacitracin zinc
NADA 126-052
Alpharma Inc.

II. TARGET ANIMAL SAFETY AND EFFECTIVENESS

Under the provisions of the Federal Food, Drug and Cosmetic Act, as amended by the Generic Animal Drug and Patent Term Restoration Action (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.

Based on the formulation characteristics of the generic product, Alpharma Inc. was granted a waiver June 30, 1997, from the requirement for an in vivo bioequivalence study for the generic product ALBAC® (bacitracin zinc). The generic product is administered as a Type C Medicated Feed, contains the same active ingredient in the same concentration and dosage form as the pioneer, and contains no inactive ingredients that may significantly affect the absorption of the active ingredient. The pioneer product BACIFERM® (bacitracin zinc), the subject of Alpharma's NADA 46-920, was approved December 11, 1981.

In accordance with the Center for Veterinary Medicine's policy letter dated November 2, 1989, as published in the Federal Register on January 30, 1990 (55 FR 3107), following the approval of an ANADA for a generic Type A Medicated article (ANADA 200-223, generic bacitracin zinc), ALPHARMA, Inc., is entitled to the approval of generic bacitracin zinc in combination with lasalocid and roxarsone. Bioequivalence studies are not required for the approval of this generic combination (Type C Medicated feed). Lasalocid is codified under 21 CFR § 558.311. Roxarsone is codified under 21 CFR § 558.530. Bacitracin zinc is codified under 21 CFR §558.78. The combination of lasalocid, roxarsone and bacitracin zinc is codified under 21 CFR § 558.311(e)(1)(ii).

III. HUMAN SAFETY

- Tolerances for the Residues:

  The tolerances established for the pioneer bacitracin zinc product apply to the generic bacitracin zinc product.

  The tolerances for residues of bacitracin from bacitracin zinc are established at 0.5 ppm (0.02 unit per gram), negligible residue, in uncooked edible tissues of chickens (21 CFR §556.70).

  The acceptable daily intake (ADI) for total residues of lasalocid is 10 micrograms per kilogram of body weight per day (21 CFR §556.347).

  The tolerance for residues of lasalocid is established at 1.2 ppm parent lasalocid in skin with adhering fat of chickens (21 CFR §556.347).

Tolerances for arsenic residues (from roxarsone) are established at 0.5 ppm in uncooked muscle tissue and eggs and 2 ppm in uncooked edible by-products of chickens (21 CFR §556.60).

- 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 time based on the information in 21 CFR §558.311(e)(1)(ii) is 5 days for the combination of lasalocid with roxarsone and bacitracin zinc in broiler chickens.

- Regulatory Methods for Residues:

  The analytical method for detection of residues of bacitracin in tissues is a microbiological test using *Sarcina subflava* (ATCC 7468) or *Micrococcus subflavus* (ATCC 10240). The method is found in Antibiotic Residues in Milk, Dairy Products, and Animal Tissues: Methods, Reports and Protocols, Revised October 1968, Reprinted December 1974, National Center for Antibiotic and Insulin Analysis, FDA, Washington, DC 20204

  Modified Method for the Determination of Bacitracin in Tissues, Test Procedure Code 9A, AL Laboratories, One Executive Dr. PO Box 1399, Fort Lee NJ 07024.

  The analytical method for detection of residues of lasalocid in tissues is a thin layer chromatographic method with bioautographic determination entitled “Thin Layer Chromatography - Bioautography Determination of Lasalocid Residues in Chicken Tissues.” This method is found in the Animal Drug Analytical Manual on file at the Center for Veterinary Medicine, 7500 Standish Place, Rockville, MD 20855.

  Another analytical method for the determination of lasalocid in tissues uses a fluorescence HPLC assay procedure. This method is found in J. Agric. & Food Chem. 31:75-78 (1983).

  The analytical method for the determination of roxarsone in tissues is a spectrophotometric method. The method is titled "Arsenic (Total) Residues in Animal Tissues, Spectrophotometric Method" published in Official Methods of Analysis of AOAC International, 16th edition.

  These methods are also found on file at the Center for Veterinary Medicine, 7500 Standish Place, Rockville, MD 20855.

IV. AGENCY CONCLUSIONS

This ANADA submitted under section 512(b) of the Federal Food, Drug, and Cosmetic Act satisfies the requirements of section 512(n) of the act and demonstrates that the combination of lasalocid, roxarsone and bacitracin zinc, when used under its proposed conditions of use, is safe and effective for its labeled indications.

Facsimile Generic Labeling and Currently Approved Pioneer Labeling are attached as indicated below:

Generic Type C medicated feed (Blue Bird)
Pioneer Type C medicated feed (Blue Bird)

Lasalocid plus Roxarsone plus ALBAC® (Bacitracin Zinc)
Broiler Chicken
Type C Medicated Feed

For the prevention of coccidiosis caused by *Eimeria tenella, E. necatrix, E. acervulina, E. brunetti, E. mivati,* and *E. maxima*; as an aid in the reduction of lesions due to *E. tenella;* and for increased rate of weight gain in broiler chickens only.

ACTIVE DRUG INGREDIENTS

Lasalocid (as lasalocid sodium)..... 68 to 113 g/ton
Roxarsone (3-nitro-4-hydroxyphenylarsonic acid)..... 45.4 g/ton
Bacitracin zinc……..……..…….. 10 g/ton

GUARANTEED ANALYSIS

Crude Protein, not less than……..……_____%
Lysine, not less than…….....……_____%
Methionine, not less than……..……_____%
Crude Fat, not less than……..……..……_____%
Crude Fiber, not more than…….……..……_____%
Calcium, not less than…….....……_____%
Calcium, not more than……..……....….._____%
Phosphorus, not less than……..……_____%
Salt[1], not less than…….....…._____%
Salt[1], not more than…….....……_____%
Sodium[2], not less than……..….....…._____%
Sodium[2], not more than…….....……_____%

[1]If added.
[2]Shall be guaranteed only when total sodium exceeds that furnished by the maximum salt guarantee.

INGREDIENTS

Each ingredient must be named in accordance with the names and definitions adopted by the Association of American Feed Control Officials.

FEEDING DIRECTIONS

Feed continuously as the sole ration; as sole source of organic arsenic.

WARNING: Withdraw five days before slaughter.

MANUFACTURED BY

BLUE BIRD FEED MILL
Robin, Indiana 46813

NET WT 50 LBS (22.67 kg)

Lasalocid plus Roxarsone plus ALBAC® (Bacitracin Zinc)
Broiler Chicken
Type C Medicated Feed

For the prevention of coccidiosis caused by *Eimeria tenella, E. necatrix, E. acervulina, E. brunetti, E. mivati,* and *E. maxima*; as an aid in the reduction of lesions due to *E. tenella;* and for improved feed efficiency in broiler chickens only.

ACTIVE DRUG INGREDIENTS

Lasalocid (as lasalocid sodium)..... 68 to 113 g/ton
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Bacitracin zinc……..……..…….. 30 g/ton

GUARANTEED ANALYSIS

Crude Protein, not less than……...……_____%
Lysine, not less than…….....……_____%
Methionine, not less than……...……_____%
Crude Fat, not less than……..……...……_____%
Crude Fiber, not more than…….……...……_____%
Calcium, not less than…….....……_____%
Calcium, not more than……..……....….._____%
Phosphorus, not less than……..……_____%
Salt[1], not less than…….....…._____%
Salt[1], not more than…….....……_____%
Sodium[2], not less than……..….....…._____%
Sodium[2], not more than…….....……_____%

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