

**Approval Date: April 9, 2003**

**FREEDOM OF INFORMATION SUMMARY**

**NADA 096-298**

**BOVATEC® 68 (Lasalocid) Type A Medicated Article**

“For increased rate of weight gain in pasture cattle (slaughter, stocker, feeder cattle, and dairy and beef replacement heifers).”

**SUPPLEMENTAL NEW ANIMAL DRUG APPLICATION**

Sponsored By:

Alpharma Inc.  
One Executive Drive  
P.O. Box 1399  
Fort Lee, NJ 07024

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## FREEDOM OF INFORMATION SUMMARY

### Bovatec® 68 for Pasture Cattle

#### 1. General Information:

- a. File Numbers: NADA 96-298
- b. Sponsor: Alpharma Inc.  
One Executive Drive  
P.O. Box 1399  
Fort Lee, New Jersey 07024  
Drug Labeler Code: 046573
- c. Established Name: Lasalocid
- d. Proprietary Name: Bovatec® 68
- e. Dosage Form: Type A Medicated Article
- f. How Supplied: Lasalocid is supplied as a Type A article that is used in the manufacture of a generic free-choice high-phosphorus loose mineral feed containing 1088 grams of lasalocid per ton feed.
- g. How Dispensed: OTC
- h. Amount of Active Ingredients: 1088 g lasalocid/ton in the Type C Free-choice Loose Mineral Feed.
- i. Route of Administration: Oral, by feed
- j. Species/Class: Pasture cattle (slaughter, stocker, feeder cattle, and dairy and beef replacement heifers).
- k. Recommended Dosage: 60-300 mg lasalocid/head/day
- l. Pharmacological Category: Lasalocid sodium (Bovatec® 68) – Ionophore
- m. Indications: For increased rate of weight gain in pasture cattle (slaughter, stocker, feeder cattle, and dairy and beef replacement heifers) when fed on a free-choice basis in the Alpharma formulated, lasalocid high phosphorus medicated ruminant mineral-vitamin Type C feed described in Table 1.

- n. Effect of Supplement: To provide for the use of lasalocid in a generic free-choice high-phosphorus loose mineral feed containing 1088 grams of lasalocid per ton feed.

**2. EFFECTIVENESS:**

Five pivotal pasture studies were conducted to determine the rate and variability of lasalocid consumption when administered in a free-choice high-phosphorus loose mineral supplement to stocker cattle and replacement heifers. At each study location cattle were allotted to three pasture replicates (8 to 12 head/group) on the basis of initial body weight. Cattle were given *ad libitum* access to a non-medicated mineral supplement during a 14-day pre-study acclimation period and a lasalocid-medicated mineral supplement (1088 g/ton, as-fed basis) throughout the 98 to 112 day treatment periods.

- A. Rose, Nebraska  
TSAH-97-11  
Investigator:  
Daryl Meyer, D.V.M.  
Lucerne Enterprise  
527 North Calmar  
Fremont, Nebraska 68025

The trial was conducted using growing mixed-breed beef heifers (black and black white face) that were approximately 6 to 8 months of age. The body weights of the cattle, prior to the 2-week acclimation period, were representative of regional production systems and ranged from 452 to 550 pounds. Initial body weight was used to randomize animals to three replicates, each consisting of 8 animals. Cattle were assigned to improved, irrigated pasture replicates of similar forage quantity and quality. The predominant forage species were orchardgrass, intermediate wheatgrass, and smooth brome with lesser amounts of creeping foxtail and birdsfoot trefoil. Cattle were rotated every 14 days throughout the study to minimize differences due to pasture conditions. The dose of lasalocid tested in the study was determined by the consumption of medicated mineral. The treatment phase lasted for 98 days.

- B. Sidney, Nebraska  
TSAH-97-12  
Investigator:  
Ivan G. Rush, Ph.D.  
University of Nebraska  
High Plains Ag Lab  
3257 Road 109  
Sidney, Nebraska 69162

This trial used growing Angus crossbred beef steers that were approximately 15 months of age. The body weights of the cattle, prior to the 2-week acclimation period, were representative of regional production systems and ranged from approximately 694 to 752 pounds. Initial body weight was used to randomize animals to three replicates, each consisting of 10 animals. Cattle were assigned to improved, irrigated pasture replicates of similar forage quantity and quality. The predominant forage species were crested wheatgrass with lesser amounts of buffalograss and blue grama. Cattle were rotated every 14 days throughout the study to minimize differences due to pasture conditions. The dose of lasalocid tested in the study was determined by the consumption of medicated mineral. The treatment phase lasted for 98 days.

- C. Simpson, Illinois  
TSAH-97-13  
Investigators:  
Dan B. Faulkner, Ph.D.  
Frank Ireland, M.S.  
University of Illinois  
Dixon Springs Agricultural Center  
Route 1, Box 256  
Simpson, Illinois 62985

The trial used growing Angus X Simmental heifers that were approximately 14 months of age and had been bred using artificial insemination. The body weights of the cattle, prior to the 2-week acclimation period, were representative of regional production systems and ranged from approximately 600 to 716 pounds. Initial body weight was used to randomize animals to three replicates, each consisting of 8 animals. Cattle were assigned to improved, irrigated pasture replicates of similar forage quantity and quality. The predominant forage species was tall fescue (variety Kentucky 31) with lesser amounts of red clover. Cattle were rotated every 14 days throughout the study to minimize differences due to pasture conditions. The dose of lasalocid tested in the study was determined by the consumption of medicated mineral.

The cattle in replicate No. 2 were not given access to the medicated mineral for a seven day period (days 42 to 49) due to an inability to reach the feeder. As a result

the study was extended for an additional 2 weeks, resulting in a 112-day treatment phase.

- D. Mt. Vernon, Missouri  
TSAH-97-14  
Investigator:  
Richard J. Crawford, Jr.  
University of Missouri  
Southwest Missouri Center  
Route 3, Box 88  
Mt. Vernon, Missouri 65712

The trial used growing English and exotic crossbred beef steers that were approximately 12 months of age. The body weights of the cattle, prior to the 2-week acclimation period, were representative of regional production systems and ranged from approximately 428 to 498 pounds. Initial body weight was used to randomize animals to three replicates, each consisting of 8 animals. Cattle were assigned to improved, irrigated pasture replicates of similar forage quantity and quality. The predominant forage species was tall fescue (*Festuca arundinacea*, Shreb.). Cattle were rotated every 14 days throughout the study to minimize differences due to pasture conditions. The dose of lasalocid tested in the study was determined by the consumption of medicated mineral. The treatment phase lasted for 98 days.

- E. Wrightstown, New Jersey  
CD-97-14  
Investigator:  
Ross Miller, D.V.M.  
Roche Vitamins, Inc.  
Animal Science Research Station  
274A Jacobstown-Arneytown Road  
Wrightstown, New Jersey 08562

The trial used growing Angus and Angus crossbred that were approximately 12 months of age. The body weights of the cattle, prior to the 2-week acclimation period, were representative of regional production systems and ranged from approximately 520 to 681 pounds. Initial body weight was used to randomize animals to three replicates, each consisting of 12 animals. Cattle were assigned to improved, irrigated pasture replicates of similar forage quantity and quality. The predominant forage species were orchardgrass, timothy, brome, and ryegrass with lesser amounts of clover. Cattle were rotated every 14 days throughout the study to minimize differences due to pasture conditions. The dose of lasalocid tested in the study was determined by the consumption of medicated mineral. The treatment phase lasted for 98 days.

Lasalocid consumption data for the five studies was analyzed using the first 98 days from each study, except for replicate 2, period 4, in the Illinois study. This was done because

cattle in replicate 2, period 4 of the Illinois study did not have access to the medicated mineral supplement for 7 days of the trial. In the analysis, a group of animals was designated as a single replicate and a period was defined as a 14-day interval during the study. There were seven 14-day intervals per study. Results from the three statistical analyses are shown in the following table:

Analysis	Parameter	Least Squares Means						
		NE TSAH -97-11	NE TSAH- 97-12	IL TSAH- 97-13	MO TSAH- 97-14	NJ CD-97- 14	Pooled Average	C.V.
5 Studies, Periods 1-7 Illinois	Mineral Consumption lbs/head/day	0.33	0.27	0.35	0.17	0.21	0.24	
	Lasalocid Consumption mg/head/day	180	145	191	94	116	145.63	28.93

### 3. TARGET ANIMAL SAFETY

The target animal safety for the administration of 300 mg/head/day lasalocid on a free-choice basis to slaughter, stocker, and feeder cattle on pasture is described in the Freedom of Information Summary in the original NADA 96-298 dated December 2, 1985, for Bovatec for Pasture Cattle Fed on a Free-Choice Basis: 51 FR February 12, 1986, p. 5162-3 approval. Three hundred forty-two cattle from the studies used in determining average daily drug intake were exposed to lasalocid in self-fed pasture supplements with concentrations of 1440 to 6000 g/t for periods of 84 to 112 days. No adverse reactions or dangerously excessive intakes were noted. The highest average daily intake of lasalocid for any group of cattle for one 14-day period was 596 mg per head, and intake decreased in the following periods. It was concluded that the addition of lasalocid to self-fed supplements for cattle on pasture is safe for use at various concentrations.

### 4. HUMAN SAFETY

Human Food Safety data were represented in original NADA 96-298 Freedom of Information Summary dated December 2, 1985, for Lasalocid for Pasture Cattle Fed on a Free-Choice Basis.

### 5. AGENCY CONCLUSIONS

The data submitted in support of this NADA satisfy the requirements of section 512 of the Federal Food, Drug, and Cosmetic Act and 21 CFR Part 514 of the implementing regulations. The data demonstrate that 60-300 mg lasalocid/head/day when administered in pasture cattle (slaughter, stocker, feeder cattle, and dairy and beef replacement heifers) is

safe and effective for increased rate of weight gain. However, intakes of lasalocid in excess of 200 mg/head/day have not been shown to be more effective than 200 mg/head/day.

The Center for Veterinary Medicine has concluded that, for this product, adequate directions for use by the lay person have been provided. Historically, the industry is familiar with the handling and mixing of Type A medicated articles into Type B and C medicated feeds. Lasalocid is not a controlled substance. Thus, labeling is adequate for the intended use.

Under the Center's supplemental approval policy (21 CFR 514.106(b)(2)), this is a Category II change. The approval of this change is not expected to have any adverse effect on the safety or effectiveness of this new animal drug. Accordingly, this approval did not require a reevaluation of the safety and effectiveness data in the parent application.

Under section 512(c)(2)(F)(iii) of the Federal Food, Drug, and Cosmetic Act, this approval qualifies for THREE years of marketing exclusivity beginning on the date of the approval. The three years of marketing exclusivity applies only to the use of a generic free-choice high phosphorus loose mineral feed containing 1088 grams of lasalocid per ton feed in pasture cattle (slaughter, stocker, feeder cattle, and dairy and beef replacement heifers) for which this supplement is approved.

**6. ATTACHMENTS:**

Facsimile Labeling is attached as indicated below:

Blue Bird Lasalocid Phos – M Cattle Free-Choice Mineral And Vitamin Supplement Type C Feed Medicated Label



Table 1

Alpharma Formulated Free-Choice  
Lasalocid High Phosphorous  
Medicated Ruminant  
Mineral-Vitamin Type C Feed

<b><u>Ingredient</u></b>	<b><u>Percent</u></b>	<b><u>IFN</u></b>
Monocalcium Phosphate (21% P)	57.50	6-01-082
Salt	17.55	6-04-152
Distillers Dried Grains w/ Solubles	5.40	5-28-236
Dried Cane Molasses (46% Sugars)	5.20	4-04-695
Potassium Chloride	4.90	6-03-755
Trace Mineral/Vitamin Premix	3.35	-----
Calcium Carbonate (38% Ca)	2.95	6-01-069
Mineral Oil	1.05	8-03-123
Magnesium Oxide (58% Mg)	1.00	6-02-756
Iron Oxide (52% Fe)	0.10	6-02-431
Bovatec 68 (Lasalocid)	0.80	-----
<b>Total</b>	<b>100.00</b>	

Lot \_\_\_\_\_

**Blue Bird Lasalocid Phos - M**  
**Cattle Free-Choice Mineral and Vitamin Supplement**  
**Type C Feed**  
**MEDICATED**

For increased rate of weight gain in pasture cattle (slaughter, stocker, feeder cattle, and dairy and beef replacement heifers).

**ACTIVE DRUG INGREDIENT**

Lasalocid (as lasalocid sodium)..... 1,088 g/ton

**GUARANTEED ANALYSIS**

Calcium, not less than .....	_____ %
Calcium, not more than .....	_____ %
Phosphorus, not less than .....	_____ %
Salt <sup>1</sup> , not less than .....	_____ %
Salt <sup>1</sup> , not more than .....	_____ %
Magnesium, not less than .....	_____ %
Potassium, not less than .....	_____ %
Copper, not less than .....	_____ ppm
Selenium, not less than .....	_____ ppm
Zinc, not less than .....	_____ ppm
Vitamin A <sup>1</sup> , not less than .....	_____ IU/lb

<sup>1</sup>If added.

**INGREDIENTS**

Monocalcium phosphate, salt, distillers dried grains with solubles, cane molasses, potassium chloride, limestone, mineral oil, magnesium oxide, ferric oxide, and additional trace minerals and vitamins as required.

**FEEDING DIRECTIONS**

Feed a non-medicated mineral supplement for 14 days prior to feeding Blue Bird Lasalocid Phos – M, then feed Blue Bird Lasalocid Phos – M continuously on a free-choice basis. Pasture and roughage should be adequate to assure consumption of 1.76 to 8.82 oz/head/day of this product, which will provide 60 to 300 mg lasalocid. If cattle consume more or less than these amounts, try moving feeder further or closer to the general resting or watering areas. If consumption of Blue Bird Lasalocid Phos – M is greater than 8.82 oz/head/day after moving feeder further from general resting or watering areas, provide salt in a separate feeder to help decrease consumption of Blue Bird Lasalocid Phos – M. Daily intakes of lasalocid in excess of 200 mg/head/day (5.88 oz Blue Bird Lasalocid Phos – M) have not been shown to be more effective than 200 mg/head/day.

**CAUTION**

The safety of lasalocid in unapproved species has not been established. Do not allow horses or other equines access to supplements containing lasalocid as ingestion may be fatal.

**WARNING**

A withdrawal period has not been established for this product in pre-ruminating cattle. Do not use in calves to be processed for veal.

**NET WEIGHT ON BAG OR BULK**

**BLUE BIRD FEED MILLS**  
Any Town, USA 12345

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\* Feed Mill License required for free-choice feeds. Must be manufactured according to specifications published in Federal Register, vol. (No.): page(s), date