DATE OF APPROVAL LETTER

FREEDOM OF INFORMATION SUMMARY

Out of specification label change for IVOMEC® SR Bolus for Cattle

I. GENERAL INFORMATION

NADA NUMBER:	140-988
SPONSOR:	Merial Limited 2100 Ronson Road Iselin, New Jersey 08830-3077
GENERIC NAME:	Ivermectin
TRADE NAME:	IVOMEC® SR Bolus for Cattle
DOSAGE FORM:	sustained-release bolus
MARKETING STATUS:	OTC in cattle, one bolus per 275-600 pounds on the day of administration
PHARMACOLOGIC CATEGORY:	Antiparasitic
EFFECT OF SUPPLEMENT:	This supplement provides for the revision of 21 CFR 520.1197(d)(2) by replacing "(approximately 135 days)" with "(approximately 130 days)" for the ivermectin delivery period.

II. INDICATIONS FOR USE

NEMATODES

The IVOMEC® SR Bolus is indicated for the treatment of established infections and, throughout its approximately 130-day ivermectin delivery period, controls the establishment of infection by newly ingested larvae of the following nematode species:

Gastrointestinal Roundworms

Haemonchus placei
Ostertagia ostertagi
Trichostrongylus axei
Trichostrongylus colubriformis
Cooperia spp.

Nematodirus helvetianus
Bunostomum phlebotomum
Oesophagostomum radiatum

Lungworms
Dictyocaulus viviparus

IVOMEC® SR Bolus controls established infections with hypobiotic (inhibited) fourth-stage larvae of *Ostertagia ostertagi*.

MANGE MITES
The IVOMEC® SR Bolus provides control of established infestations of the following mange mites and prevents reinfestation for 130 days.
Psoroptes ovis
Sarcoptes scabiei

SUCKING LICE
The IVOMEC® SR Bolus provides control of established infestations of the following sucking lice and prevents reinfestation for 130 days.
Linognathus vituli
Solenopotes capillatus

CATTLE GRUBS
Initially, control is provided against migrating *Hypoderma* larvae or grubs acquired prior to administration of the IVOMEC SR Bolus; thereafter, prophylaxis is provided for approximately 130-days against newly acquired larvae.
Hypoderma spp

TICKS
Control of the following tick will be provided by interfering with engorgement with blood and completion of the reproductive portion of the life cycle by newly acquired young adult females during the period of ivermectin delivery. However, larvae, nymphs and adult males, as well as young adult females already on the host at the time of treatment and actively in the engorgement process, may not be visibly affected.
Amblyomma americanum

III. DOSAGE

A. Dosage Form: sustained-release bolus

B. Route of Administration: oral

C. Recommended Dosage: One bolus (containing 1.72 g ivermectin) is to be given orally to cattle at least 12 weeks of age and weighing 275 lb (125 kg) to 660 lb.

(300 kg) body weight on the day of administration. Each bolus is formulated to deliver 12 mg of ivermectin/day for 130 days.

IV. EFFECTIVENESS

Effectiveness in cattle was established originally under NADA 140-988. No additional data were required for approval of this supplement. Due to the increased amount of stability data now available, it is necessary to decrease the predicted lifetime specification for the IVOMEC SR Bolus. When the original lifetime prediction model was developed, only a limited body of knowledge was available concerning the effect of sample age on the predicted lifetime. Now that additional data are available through the 24-month expiry, a more appropriate shelf-life specification is proposed. The shelf-life specification was lowered from 116.5-152.1 days to 109.4-145.0 days. The ivermectin delivery period at release was then decreased from 116.5-152.1 days to 116.5-145.0 days. The label was modified to reflect this change from an ivermectin delivery period of "approximately 135-days" to "approximately 130-days".

V. TARGET ANIMAL SAFETY

Animal safety in cattle was established originally under NADA 140-988. No additional data were required for approval of this supplement.

VI. HUMAN FOOD SAFETY

As discussed in the parent NADA 140-988 FOI Summary (approval date November 18, 1996). For a complete summary of the toxicity tests for ivermectin, please consult the FOI Summary for NADA 128-409, IVOMEC® (ivermectin) 1% Injection for Cattle.

VII. AGENCY CONCLUSIONS

The information submitted in support of this supplemental application satisfy the requirements of Section 512 of the Federal Food, Drug, and Cosmetic Act and 21 CFR Part 514 of the implementing regulations to revise 21 CFR 520.1197(d)(2) to reduce the period of protection from approximately 135 to approximately 130 days. All the other original indications remain the same.

There are no changes to the codified tolerances for ivermectin in cattle or to the established pre-slaughter withdrawal time of 120 days.

The Agency has concluded that this product shall retain over-the-counter marketing status because adequate directions for use have been written for the layman and the conditions for use prescribed on the label are likely to be followed in practice.

In accordance with 21 CFR 514.106(b)(2), this is a Category II change which did not require a reevaluation of the safety or effectiveness data in the parent application.

Under section 512(c)(2)(F)(ii) of the FFDCA, this approval for food producing animals does not qualifies for marketing exclusivity because the supplemental application does not contains substantial evidence of the effectiveness of the drug involved, any studies of animal safety, or, in the case of food producing animals, human food safety studies (other than bioequivalence or residue studies) required for the approval of the application and conducted or sponsored by the applicant.

The agency has determined under 21 CFR 25.33(a)(1) that this action is of a type that does not individually or cumulatively have a significant impact on human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

IVOMEC® SR Bolus for cattle is under U.S. patent numbers:

Patent Number	Expiration Date
4327725	November 30, 2000
4595583	March 19, 2004
4684524	June 17, 2003
4692336	June 17, 2003
4704118	August 16, 2005
4717568	May 1, 2005
4717718	June 17, 2003
4729793	March 8, 2005
4772474	June 12, 2003
4844984	June 17, 2003
4927633	June 17, 2003
4966767	October 30, 2007
5000957	June 17, 2003
5122128	June 16, 2009
5206024	April 27, 2010
5223266	June 29, 2010
5368863	June 29, 2010
5372776	December 13, 2001
5417976	April 27, 2010
5431919	June 23, 2013
5474785	July 20, 2010
5607696	February 10, 2015

VIII. APPROVED LABELING (Attached)

1. Bolus label
2. 12x Carton

3. Package Insert
4. 72x Carton