Veterinary Medicines Directorate

United Kingdom
Veterinary Medicines Directorate
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NATIONAL PROCEDURE

PUBLICLY AVAILABLE ASSESSMENT REPORT FOR A VETERINARY MEDICINAL PRODUCT

Fendicam 20 mg/ml solution for injection for cattle, pigs and horses

Date Created: October 2016

MODULE 1

PRODUCT SUMMARY

Name, strength and pharmaceutical form	Fendicam 20 mg/ml solution for injection for cattle, pigs and horses
Applicant	Boehringer Ingelheim Animal Health UK Ltd Ellesfield Avenue Bracknell Berkshire RG12 8YS
Active substance	Meloxicam
ATC Vetcode	QM01AC06
Target species	Cattle, pigs and horses
Indication for use	**Cattle:** For use in acute respiratory infection with appropriate antibiotic therapy to reduce clinical signs in cattle. For use in diarrhoea in combination with oral re-hydration therapy to reduce clinical signs in calves of over one week of age and young, non-lactating cattle. For adjunctive therapy in the treatment of acute mastitis, in combination with antibiotic therapy. **Pigs:** For use in non-infectious locomotor disorders to reduce the symptoms of lameness and inflammation. For adjunctive therapy in the treatment of puerperal septicaemia and toxaemia (mastitis-metritis-agalactia syndrome) with appropriate antibiotic therapy. **Horses:** For use in the alleviation of inflammation and relief of pain in both acute and chronic musculo-skeletal disorders. For the relief of pain associated with equine colic.

MODULE 2

The Summary of Product Characteristics (SPC) for this product is available on the Product Information Database of the Veterinary Medicines Directorate.

(www.gov.uk/check-animal-medicine-licensed)

MODULE 3

PUBLIC ASSESSMENT REPORT

Legal basis of original application	A generic application in accordance with Article 13 (3) of Directive 2001/82/EC as amended.

I. SCIENTIFIC OVERVIEW

This was a generic application submitted in accordance with Article 13 (1) of Directive 2001/82/EC (as amended). The marketing authorisation was granted on the basis that the product qualified for a waiver from conducting *in vivo* bioequivalence studies. The reference product was Metacam 20 mg/ml Solution for Injection for Cattle Pigs and Horses authorised in the UK since 2001. A bioequivalence waiver was accepted according to the CVMP guideline on the conduct of bioequivalence studies for veterinary medicinal products, EMA/CVMP/016/00 Rev.2.

Cattle
In cattle the product is indicated for use in acute respiratory infection with appropriate antibiotic therapy to reduce clinical signs in cattle, use in diarrhoea in combination with oral re-hydration therapy to reduce clinical signs in calves of over one week of age and young, non-lactating cattle, and for adjunctive therapy in the treatment of acute mastitis, in combination with antibiotic therapy.

The product is administered as a single subcutaneous or intravenous injection at a dose rate of 0.5 mg meloxicam per kg bodyweight (2.5 ml of product per 100 kg bodyweight).

Pigs
In pigs the product is indicated for use in non-infectious locomotor disorders to reduce the symptoms of lameness and inflammation, and for adjunctive therapy in the treatment of puerperal septicaemia and toxaemia (mastitis-metritis-agalactia syndrome) with appropriate antibiotic therapy.

The product is administered as a single intramuscular injection at a dose rate of 0.4 mg meloxicam per kg bodyweight (2 ml of product per 100 kg bodyweight). If required, a second administration of meloxicam can be given after 24 hours.

Horses
In horses the product is indicated for use in the alleviation of inflammation and relief of pain in both acute and chronic musculo-skeletal disorders, and for the relief of pain associated with equine colic.

The product is administered as a single intravenous injection at a dose rate of 0.6 mg meloxicam per kg bodyweight (3 ml of product per 100 kg bodyweight).

The product is produced and controlled using validated methods and tests which

ensure the consistency of the product released on the market. It has been shown that the product can be safely used in the target species, any reactions observed are indicated in the SPC.[1] The product is safe for the user, the consumer of foodstuffs from treated cattle and pigs and for the environment, when used as recommended. Suitable warnings and precautions are indicated in the SPC. The efficacy [2] of the product was demonstrated according to the claims made in the SPC. The overall benefit/risk analysis is in favour of granting a marketing authorisation.

II. QUALITATIVE AND QUANTITIATIVE PARTICULARS OF THE CONSTITUENTS

II.A. Composition

The product contains meloxicam 20 mg/ml and excipients ethanol (as ethanol 96 per cent).

The container/closure system consists of a colourless glass vial closed with a grey bromobutyl rubber stopper and sealed with an aluminium cap. The particulars of the containers and controls performed are provided and conform to the regulation.

The choice of the formulation and the presence of preservative are justified.

The product is an established pharmaceutical form and its development is adequately described in accordance with the relevant European guidelines.

II.B. Description of the Manufacturing Method

The product is manufactured fully in accordance with the principles of good manufacturing practice from a licensed manufacturing site. The manufacturing method consists of a standard process of mixing, filtering and sterilisation.

Process validation data on the product have been presented in accordance with the relevant European guidelines.

II.C. Control of Starting Materials

The active substance is meloxicam an established substance described in the European Pharmacopoeia and British Veterinary Pharmacopoeia. The active substance is manufactured in accordance with the principles of good manufacturing practice.

The active substance specification is considered adequate to control the quality of the material. Batch analytical data demonstrating compliance with this specification have been provided. Appropriate ASMF[3] data were provided.

[1] SPC – Summary of product Characteristics.
[2] Efficacy – The production of a desired or intended result.
[3] ASMF – Active Substance Master File

All excipients are monographed within the European Pharmacopoeia acceptable Certificates of Analysis were provided. Packaging was suitably verified for use.

II.C.4. Substances of Biological Origin

There are no substances within the scope of the TSE Guideline present or used in the manufacture of this product.

II.D. Control Tests Carried Out at Intermediate Stages of the Manufacturing Process

Not applicable

II.E. Control Tests on the Finished Product

The finished product specification controls the relevant parameters for the pharmaceutical form. The tests in the specification, and their limits, have been justified and are considered appropriate to adequately control the quality of the product. Satisfactory validation data for the analytical methods have been provided. Batch analytical data from the proposed production sites have been provided demonstrating compliance with the specification. Control tests on the finished product include: appearance, clarity, volume, pH, density, sterility, identification and assay of meloxicam and ethanol.

II.F. Stability

Stability data on the finished product have been provided in accordance with applicable European guidelines, demonstrating the stability of the product throughout its shelf life when stored under the approved conditions. Batches were stored under VICH[4] conditions of 25°C/60% RH, 30°C±2°C/65% RH ±5% and 40°C/75% RH for a variety of time periods, and the results are reflected in the established shelf-life data information provide in the SPC.

G. Other Information

Shelf life of the veterinary medicinal product as packaged for sale: 3 years.
Shelf life after first opening the immediate packaging: 28 days.
This veterinary medicinal product does not require any special storage conditions.

III. SAFETY AND RESIDUES DOCUMENTATION (PHARMACO-TOXICOLOGICAL)

For generics, insert in the relevant sections as appropriate:

As this is a generic application according to Article 13 (1) and bioequivalence with a reference product has been established, via essential similarity, toxicological data are not required.

[4] VICH – International Cooperation on Harmonisation of Technical requirements for Veterinary Medicinal Products.

Warnings and precautions as listed on the product literature are the same as those of the reference product and are adequate to ensure safety of the product to users, the environment and consumers.

III.A Safety Documentation

User Safety

A user risk assessment was provided in compliance with the relevant guideline.

- Accidental self-injection may give rise to pain.
- People with known hypersensitivity to non-steroidal anti-inflammatory drugs (NSAIDs) should avoid contact with the veterinary medicinal product.
- In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label to the physician.
- In view of the risk of accidental self-injection and the known adverse class-effects of NSAIDs and other prostaglandin inhibitors on pregnancy and/or embryofoetal development, the veterinary medicinal product should not be administered by pregnant women or women attempting to conceive.

Warnings and precautions as listed on the product literature are adequate to ensure safety to users of the product.

Environmental Safety

A phase I environmental risk assessment was carried out according to VICH and CVMP guidelines.

Phase I:

The product will be used to treat a small number of animals in a flock or herd and as such environmental exposure will be low. A Phase II ERA was not required.

III.B.2 Residues documentation

Residue Studies

The applicant has conducted residue depletion studies in cattle and pigs. A residue depletion study data for horses was required as the product is administered intravenously.

The analytical method was LC-MS/MS (for residue marker, meloxicam). The method was fully validated.

MRLs

Meloxicam is listed in Table 1 of Regulation 37/2010 and MRLs have been established for edible tissues and milk. The marker substance is meloxicam.

MRLs are listed below:

	Bovine	Porcine	Equidae
Muscle	20 µg/kg	Not applicable	Not applicable
Liver	Not applicable	65 µg/kg	Not applicable
Kidney	Not applicable	Not applicable	65 µg/kg
Milk	15 µg/kg	Not applicable	Not applicable

Withdrawal Periods

Based on the data provided, the following withdrawal periods are justified.

Cattle:
Meat and offal: 15 days.
Milk: 5 days (120 hours).

Pigs:
Meat and offal: 5 days

Horses:
Meat and offal: 5 days.
Not authorised for use in horses producing milk for human consumption.

IV CLINICAL DOCUMENTATION

As this is a generic application according to Article 13 (1) and bioequivalence with a reference product has been established, via essential similarity, efficacy studies are not required. The efficacy claims for this product are equivalent to those of the reference product.

IV.I. Pre-Clinical Studies

Pharmacology

The applicant has provided *in vitro* and *in vivo* studies which documented the known pharmacodynamic properties of meloxicam. No pharmacokinetic studies were presented.

V OVERALL CONCLUSION AND BENEFIT– RISK ASSESSMENT

The data submitted in the dossier demonstrate that when the product is used in accordance with the Summary of Product Characteristics, the benefit/risk profile of the product is favourable.

MODULE 4

POST-AUTHORISATION ASSESSMENTS

The SPC and package leaflet may be updated to include new information on the quality, safety and efficacy of the veterinary medicinal product. The current SPC is available on the Product Information Database of the Veterinary Medicines Directorate website.

(www.gov.uk/check-animal-medicine-licensed)

The post-authorisation assessment (PAA) contains information on significant changes which have been made after the original procedure which are important for the quality, safety or efficacy of the product.

The PAA for this product is available on the Product Information Database of the Veterinary Medicines Directorate website.

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