



**Veterinary  
Medicines  
Directorate**

**United Kingdom  
Veterinary Medicines Directorate  
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**NATIONAL PROCEDURE**

**PUBLICLY AVAILABLE ASSESSMENT REPORT FOR A VETERINARY  
MEDICINAL PRODUCT**

**Meloxaid 5 mg/ml Solution for Injection for Dogs and Cats**

**Date Created: April 2016**

## MODULE 1

### PRODUCT SUMMARY

Name, strength and pharmaceutical form	Meloxid 5 mg/ml Solution for Injection for Dogs and Cats
Applicant	Norbrook Laboratories Limited Station Works Camlough Road Newry Co. Down BT35 6JP
Active substance	Meloxicam
ATC Vetcode	QM01AC06
Target species	Dogs and Cats
Indication for use	<u>Dogs:</u> Alleviation of inflammation and pain in both acute and chronic musculo-skeletal disorders. Reduction of post-operative pain and inflammation following orthopaedic and soft tissue surgery.  <u>Cats:</u> Reduction of post-operative pain after ovariohysterectomy and minor soft tissue surgery.

## **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](http://www.gov.uk/check-animal-medicine-licensed)

## MODULE 3

### PUBLIC ASSESSMENT REPORT

Legal basis of original application	Generic application in accordance with Article 13 (1) of Directive 2001/82/EC as amended.
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Meloxaid 5 mg/ml Oral Suspension for Dogs and Cats has been developed as a generic of Metacam 5 mg/ml Solution for Injection for Dogs and Cats which has been centrally authorised since 1998.

The product is indicated for alleviation of pain and inflammation in acute and chronic musculo-skeletal disorders in dogs, and reduction of post-operative pain and inflammation following orthopaedic and soft tissue surgery. In cats, the product may be used to treat post-operative pain after ovariohysterectomy and minor soft tissue surgery. The product is contraindicated in pregnant and lactating animals, animals less than 6 weeks of age and in animals suffering from gastrointestinal disorders, impaired hepatic, cardiac or renal function and haemorrhagic disorders. The product should not be used in cats weighing less than 2 kg.

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.<sup>1</sup> The product is safe for the user, and for the environment, when used as recommended. Suitable warnings and precautions are indicated in the SPC. The efficacy<sup>2</sup> 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 QUANTITATIVE PARTICULARS OF THE CONSTITUENTS

### II.A. Composition

The product contains 5 mg/ml meloxicam and the excipients meglumine, glycine, ethanol (anhydrous), poloxamer 188, sodium chloride, glycofurol, sodium hydroxide (for pH adjustment), hydrochloric acid, (for pH adjustment), and water for injections

The container/closure system consists of a glass injection vial of 10, 20 or 100 ml, closed with a bromobutyl stopper and sealed with an aluminium cap. The particulars of the containers and controls performed are provided and conform to the regulation.

<sup>1</sup> SPC – Summary of product Characteristics.

<sup>2</sup> Efficacy – The production of a desired or intended result.

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 mixing the active substance with excipients until completely dissolved, adjusting the pH of the solution as necessary, before filling into the bottles. 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 active substance described in the European Pharmacopoeia (Ph. Eur.). Data on the active substance were provided in the form of a Ph. Eur. Certificate of Suitability. 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.

The excipients are all described in a pharmacopoeia and comply with their respective monographs. Certificates of analysis have been provided.

#### ***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. Control tests on the finished product include identification and assay of the active substance and related substances, identification and assay of the preservative, syringeability, pH and sterility.

Satisfactory validation data for the analytical methods have been provided. Batch analytical data from the test production site have been provided demonstrating compliance with the specification.

### ***II.F. Stability***

Stability data on the active substance have been provided in accordance with applicable European guidelines, demonstrating the stability of the active substance when stored under the approved conditions. A retest period of 3 years is specified by the Ph. Eur. Certificate of Suitability.

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.

In-use stability studies were also performed for several presentations, which provided acceptable data.

### ***G. Other Information***

Shelf life of the finished product as packaged for sale is 3 years.  
Shelf life after first opening the immediate packaging is 28 days.

## **III. SAFETY AND RESIDUES DOCUMENTATION (PHARMACOTOXICOLOGICAL)**

As this is a generic application according to Article 13 (1) of Directive 2001/82/EC as amended, and bioequivalence with a reference product has been demonstrated, results of pharmacological and toxicological tests are not required.

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 and the environment.

### ***III.A Safety Documentation***

#### ***User Safety***

A user risk assessment was provided in compliance with the relevant guideline which considers the risk following accidental spillage onto skin, into the eye, accidental ingestion by a child and accidental self-injection. These risks have been mitigated by adequate warnings on the product literature. The risks to the user are considered to be the same as those for the reference product. Warnings and precautions as listed on the product literature are adequate to ensure safety to users of the product.

- Accidental self-injection may give rise to pain. People with known hypersensitivity to 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.

### **Environmental Safety**

An Environmental Risk Assessment (ERA) has been supplied. The ERA was conducted in accordance with VICH and CVMP guidelines.

#### **Phase I:**

The product will only be used in non-food animals and as a result environmental exposure will be low. Therefore, a Phase II ERA was not required.

## **IV CLINICAL DOCUMENTATION**

### **IV.1. Pre-Clinical Studies**

#### **Pharmacology**

An *in vivo* bioequivalence study was not required for this product, as exemption from providing these data was accepted under the guideline EMA/CVMP/016/00-Rev.2, whereby the product and reference product are demonstrated to be essentially similar.

#### **Tolerance in the Target Species**

##### Dogs

The applicant has conducted a controlled target animal tolerance study using multiple doses in the target species. Healthy dogs were randomly assigned into treatment groups of 5 dogs. Group A received the test product (0.5% w/v meloxicam injection) at 0.2 mg/kg once daily for 3 consecutive days. Group B received the test product (0.5% w/v meloxicam injection) at 0.4 mg/kg once daily for 3 consecutive days. Group C received a saline injection at a dose rate of 0.04 ml/kg once daily for 3 consecutive days.

Clinical examinations were performed at regular intervals following administration of the product. Blood and faecal samples were taken for biochemistry and haematology at various time points and animals were weighed as appropriate. A repeated measures ANOVA was performed for all clinical, biochemical and haematological parameters.

Occult blood was detected in several dogs; including 1 animal from Group A and 4 animals from Group B. The SPC carries a suitable warning. No dose-related effect was observed during study and the product is considered to be safe for the target species.

##### Cats

The applicant has conducted a controlled target animal tolerance study using multiple doses in the target species. Twelve healthy cats were randomly

assigned into treatment groups of 4 animals. Group A received the test product (0.5% w/v meloxicam injection) at 0.3 mg/kg bodyweight once daily for 3 days. Group B received the test product (meloxicam 0.5% w/v injection) once daily at 0.6 mg/kg bodyweight for 3 days. Group C received a saline injection administered at a dose of 0.06 ml/kg once daily for 3 days.

Clinical examinations were performed at regular intervals following administration of the product. Blood and faecal samples were taken for biochemistry and haematology at various time points and animals were weighed as appropriate. A repeated measures ANOVA was performed for all clinical, biochemical and haematological parameters.

Minor adverse reactions (vomiting/diarrhoea) were noted in some animals. No severe reactions were observed. The product literature accurately reflects the type and incidence of adverse effects which might be expected.

#### ***IV.II. Clinical Documentation***

As this is a generic application according to Article 13 (1) of Directive 2001/82/EC as amended, and bioequivalence with a reference product has been demonstrated, clinical studies are not required.

### **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(s) 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](http://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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