

**IPAR**



**Publicly Available Assessment Report for a  
Veterinary Medicinal Product**

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KARIFLOX 100 mg/ml Oral Solution for Chickens and Turkeys

**PRODUCT SUMMARY**

EU Procedure number	IE/V/0201/001/DC
Name, strength and pharmaceutical form	Kariflox10 % w/v Oral Solution
Active substance(s)	Enrofloxacin
Applicant	Laboratories Karizoo, S. A.  Mas Pujades, 11-12 Pol. Ind. La Borda 08140 Caldes de Montbui Spain
Legal basis of application	Generic application in accordance with Article 13(1) of Directive 2001/82/EC as amended.
Date of Authorisation	27/02/2008
Target species	Chickens and Turkeys
Indication for use	For the treatment of diseases of the respiratory tract due to <i>Escherichia coli</i> or/and <i>Mycoplasma gallisepticum</i> , where clinical experience and/or sensitivity testing indicates enrofloxacin as the drug of choice.
ATCvet code	QJ01MA90
Concerned Member States	NL, HU

**PUBLIC ASSESSMENT REPORT**

The public assessment report reflects the scientific conclusion reached by the HPRA at the end of the evaluation process and provides a summary of the grounds for approval of the marketing authorisation for the specific veterinary medicinal product. It is made available by the HPRA for information to the public, after the deletion of commercially confidential information. The legal basis for its creation and availability is contained in Article 25.4 of EC Directive 2001/82/EC as amended by Directive 2004/28/EC for veterinary medicinal products. It is a concise document which highlights the main parts of the documentation submitted by the applicant and the scientific evaluation carried out by the HPRA leading to the approval of the product for marketing in Ireland.

The Summary of Product Characteristics (SPC) for this product is available on the HPRA's website.

## I. SCIENTIFIC OVERVIEW

### ***For public assessment reports for the first authorisation in a range:***

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.

The product is safe for the user, the consumer of foodstuffs from treated animals and for the environment, when used as recommended. Suitable warnings and precautions are indicated in the SPC.

The efficacy 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. QUALITY ASPECTS

### **A. Composition** <?xml:namespace prefix = o ns = urn:schemas-microsoft-com:office:office />

The product contains Enrofloxacin 100 mg/ml and the excipients benzyl alcohol, potassium hydroxide and purified water. The container/closure system is 250 ml, 1 litre and 5 litre HDPE containers with HDPE screw cap and induction seal. The product is an established pharmaceutical form and its development is adequately described in accordance with the relevant European guidelines.

### **B. Method of Preparation of the Product**

The product is manufactured fully in accordance with the principles of good manufacturing practice at a licensed manufacturing site.

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

### **C. Control of Starting Materials**

The active substance is an established active substance which is not described in the European/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.

### **D. Specific Measures concerning the Prevention of the Transmission of Animal Spongiform Encephalopathies**

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

### **E. Control on intermediate products**

Not applicable.

### **F. 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 site have been provided demonstrating compliance with the specification.

### **G. 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.

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.

A shelf-life of 3 years, an in-use shelf of 3 months and a shelf life following dilution of 24 hours is supported by the data. No special precautions for storage are required.

### **H. Genetically Modified Organisms**

### **J. Other Information**

Not applicable.

**III SAFETY AND RESIDUES ASSESSMENT (PHARMACO-TOXICOLOGICAL)****III.A Safety Testing****Pharmacological Studies****2.1. Pharmacodynamics**

The application is made in accordance with Article 13(1) of Council Directive 2001/82/EC (as amended), a generic application and therefore data on pharmacodynamics are not required.

The information proposed for inclusion in section 5.1 of the SPC for the test product reflects the text approved for section 5.1 of the SPC for the reference product, Baytril 10% Solution, in the RMS.

**2.2. Pharmacokinetics**

The applicant claims exemption from bioequivalence studies in accordance with paragraph 4(e) of the Guideline for Conduct of Bioequivalence Studies (EMA/CVMP/016) because:

- the product is an oral solution

-it contains an active substance or therapeutic moiety in the same concentration as a product approved for use in the target species that is the subject of the new application

- it contains no inactive substance that can significantly affect the absorption of the active substance or therapeutic moiety. Given that the criteria as detailed in paragraph 4(e) of the Guideline for Conduct of Bioequivalence Studies (EMA/CVMP/016) have been satisfied, it is accepted that the test product can be considered bioequivalent to the reference product, Baytril 10% Solution, without the need for specific bioequivalence studies.

The information proposed for inclusion in section 5.2 of the SPC for the test product reflects the text approved for section 5.2 of the SPC for the reference product, Baytril 10% Solution, in the RMS.

**Toxicological Studies**

The application is made in accordance with Article 13(1) of Council Directive 2001/82/EC (as amended), a generic application. Based on information provided in support of this application it is accepted that the test product is bioequivalent to the reference product (Baytril 10% Solution). Consequently, specific toxicological data relating to the active substance are not presented.

Note that the safety of the final formulation in the target animal is commented on in Part IV of this report.

**User Safety**

The application is made in accordance with Article 13(1) of Council Directive 2001/82/EC (as amended), a generic application. As such, it can be assumed that the risk to the user arising from the active substance is not going to be any greater for the test product, compared to the reference product.

The excipients are widely used in veterinary medicinal products.

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

**Ecotoxicity**

An environmental risk assessment was presented in support of this application: The Applicant concluded that no risks to the environment are anticipated when the product is used in accordance with label recommendations.

Warnings and precautions as listed on the product literature are adequate to ensure safety to the environment when the product is used as directed.

**III.B Residues documentation**

Exemption from bioequivalence studies (in accordance with paragraph 4(e) of the Guideline for Conduct of Bioequivalence Studies (EMA/CVMP/016)) is accepted because the product is an oral solution containing an active substance in the same concentration as a product approved for use in the same target species, and it contains no inactive substance that can significantly affect the absorption of the active substance.

As the test product is bioequivalent to Baytril 10% Oral Solution, it is accepted that the safety profile will be similar to that of the reference product. In addition, it is accepted that there will be no difference between products with respect to depletion of residues of enrofloxacin. Further, it is noted that the excipients in the formulation are listed in Annex II of Council Regulation 2377/90 or are generally regarded as safe.

The proposed withdrawal periods for the test product for meat and offal of both chickens (4 days) and turkeys (4 days) are in line with the withdrawal periods authorised for the reference product and are considered adequate. No withdrawal period is established for eggs, therefore it is contraindicated to use in birds in lay or within four weeks before the onset of lay where eggs are intended for human consumption.

## **IV. CLINICAL ASSESSMENT**

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

#### ***Pharmacology***

See Part IIIA

#### ***Tolerance in the Target Species of Animals***

A target animal safety study specific to the test product has not been presented with the application. Given that:

- the product is an oral dose form,
- bioequivalence with an authorised reference product is claimed,
- the toxicological profile of the active substance is well known, and

the excipients are recognised as being safe,

the absence of tolerance studies specific to the test product can be accepted.

#### ***Resistance***

The application is made in accordance with Article 13(1) of Council Directive 2001/82/EC (as amended), a generic application. As such, the resistance profile is expected to be the same as for the reference product.

Adequate warnings and precautions appear on the product literature.

### ***IV.B Clinical Studies***

Exemption from bioequivalence studies (in accordance with paragraph 4(e) of the Guideline for Conduct of Bioequivalence Studies (EMA/CVMP/016)) is accepted because the product is an oral solution containing an active substance in the same concentration as a product approved for use in the same target species, and it contains no inactive substance that can significantly affect the absorption of the active substance.

As the test product is accepted to be bioequivalent to Baytril 10% Oral Solution, it is accepted that the efficacy profile will be similar to that of the reference product.

The proposed SPC text reflects the authorised SPC of the reference product.

## **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 risk benefit profile for the target species is favourable and the quality and safety of the product for humans and the environment is acceptable.

## **VI. 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 HPRA website.

This section 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.

#### **Changes:**

None.