**IPAR**

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

Peptizole 370 mg/g Oral Paste for Horses

**PRODUCT SUMMARY**

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| EU Procedure number | IE/V/0307/001/DC |
| Name, strength and pharmaceutical form | Peptizole 370 mg/g Oral Paste for Horses |
| Active substance(s) | Omeprazole |
| Applicant | Norbrook Laboratories (Ireland) Limited,<br>Rossmore Industrial Estate,<br>Monaghan,<br>Ireland |
| Legal basis of application | Generic application in accordance with Article 13(1) of Directive 2001/82/EC as amended. |
| Date of completion of procedure | 26 June 2013 |
| Target species | Horses |
| Indication for use | For treatment and prevention of gastric ulcers. |
| ATCvet code | QA02BC01 |
| Concerned Member States | AT, BG, CZ, DK, EE, EL, ES, FI, HU, IT, LT, LV, NO, PL, PT, RO, SK |

**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**

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.Qualitative and Quantitative Particulars***

The product contains 370 mg/g of omeprazole and the excipients ethanolamine, yellow iron oxide, cinnamon leaf oil and liquid paraffin.
The container/closure system is a disposable dial-a-dose syringe with a polyethylene barrel, plunger and end cap, with a polypropylene dosing ring.The choice of the formulation is justified.
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 omeprazole, an established active substance described in the European 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.

*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.

***D.Control on Intermediate Products***

Not applicable.

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

***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.

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.

***G.Other Information***

Not applicable.

**III SAFETY AND RESIDUES ASSESSMENT (PHARMACO-TOXICOLOGICAL)**

This is a generic application submitted in accordance with Article 13.1. The applicant provided the results of an *in-vivo* bioequivalence study using GastroGard 37% w/w Oral Paste for Horses (Merial Animal Health Limited) as authorised in the UK as reference product.

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

***III.ASafety Testing***

***Pharmacological Studies***

The applicant has provided bibliographical data in support of the pharmacodynamic properties of omeprazole. It can be accepted that omeprazole is a well known proton pump inhibitor with long established use in human medicine. It exerts it's mode of action by the inhibition of H+/K+ - ATPase enzymes resulting in gastric proton pump inhibition and resultant inhibition of gastric acid production at the parietal cell level.

***Toxicological Studies***

The applicant has provided bibliographical data in support of the toxicological profile of the product which was considered to satisfactorily demonstrate an adequate safety profile.

***Observations in Humans***

It is accepted that the active substance omeprazole has been used in human medicines for in excess of 20 years with an acceptable tolerance profile.

***User Safety***

The applicant has provided a user safety assessment in compliance with the relevant guideline which shows that the product is unlikely to present an unacceptable risk for the user when used, stored and disposed of in accordance with the recommendations in the SPC.

***Environmental Risk Assessment***

The applicant provided a first phase environmental risk assessment in compliance with the relevant guideline which showed that no further assessment is required.
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.BResidues Documentation***

***Residue Studies***

No residue study data was provided. The product is to be administered orally using the same posology approved for the reference product.

***MRLs***

Omeprazole is listed in Table 1 of Commission Regulation (EU) No 37/2010 as no MRL required for equidae.

***Withdrawal Periods***

The adequacy of the withdrawal period was justified by reference to the CVMP MRL summary report for omeprazole and ADI calculations. Further, it was accepted that the product is bioequivalent to the reference product in terms of $C_{max}$.

The withdrawal period of 1 day is considered adequate to ensure consumer safety.

**IV. CLINICAL ASSESSMENT**

This is a generic application submitted in accordance with Article 13.1. The applicant provided the results of an *in-vivo* bioequivalence study using GastroGard 37% w/w Oral Paste for Horses (Merial Animal Health Limited) as authorised in the UK as reference product.

***IV.APre-Clinical Studies***

***Pharmacology***

The applicant has provided bibliographical data in support of the pharmacokinetics of omeprazole. In addition, the results of an *in-vivo* bioequivalence study were provided. Bioequivalence with the reference product was not demonstrated for the parameter AUC, with the upper limit of the confidence interval being exceeded. It was concluded that bioavailability of omeprazole in the product is slightly increased when compared with the reference product.

In order to address possible concerns in terms of target animal tolerance arising from the slightly increased bioavailability of omeprazole, the applicant provided results of a target animal tolerance study.

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

The applicant provided the results of a target animal tolerance study investigating tolerance to doses of x5 and x10 the recommended treatment dose.

Based upon the results of this study, it could be concluded that the product will not present an unacceptable risk to the target animal when administered as recommended in the SPC. No specific warnings in terms of adverse reactions are considered necessary.

***IV.B Clinical Studies***

***Laboratory Trials***

The applicant provided a review of the published literature to summarise the pharmacological profile and effectiveness of omeprazole in the target species for the indications.

The results of the comparative bioavailability study conducted by the applicant suggest that the candidate formulation is supra-bioavailable when compared with the reference product.

The concentration of active substance in the product is the same as in the reference product and the product is intended for administration at the same dose rate, frequency and duration as the reference product. Consequently, it could be concluded that the product will be at least as efficacious as the reference product.

***Field Trials***
No field trials were conducted.

## 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 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.