Veterinary Medicines Directorate

United Kingdom
Veterinary Medicines Directorate
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NATIONAL PROCEDURE

PUBLICLY AVAILABLE ASSESSMENT REPORT FOR A VETERINARY MEDICINAL PRODUCT

EquiShield EHV, Emulsion for Injection for Horses

Date Created: May 2023

MODULE 1

PRODUCT SUMMARY

Name, strength and pharmaceutical form	EquiShield EHV, Emulsion for Injection for Horses, Emulsion for injection
Applicant	Dechra Regulatory BV Handelsweg 25 Bladel, 5531 AE The Netherlands
Active substance(s)	Inactivated equine herpes virus type 1
ATC Vetcode	QI05AA05
Target species	Horses
Indication for use	For active immunization of horses to reduce clinical signs and to reduce virus excretion during respiratory disease caused by equine herpesvirus type 1 (EHV-1) infections. Onset of immunity: 2 weeks after the second vaccine injection Duration of immunity has only been demonstrated after the administration of three vaccine injections (see section 4.9): 6 months after the 3rd vaccine injection. For active immunisation of pregnant mares to reduce the occurrence of abortions caused by equine herpesvirus type 1 (EHV-1) infections. Onset immunity: 3 weeks after the 3rd vaccine injection during gestation Duration of immunity: until the end of pregnancy.

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	Full GB only application in accordance with Article 12(3) of Directive 2001/82/EC as amended.
Date of conclusion of the procedure	1/3/2023

1. 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, any reactions observed are indicated in the SPC.[1] 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 [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 QUANTITATIVE PARTICULARS OF THE CONSTITUENTS

II.A. Composition

The product contains inactivated equine herpes virus type 1 and the excipients montanide ISA 35 VG, thiomersal, sodium chloride, potassium chloride, potassium dihydrogen phosphate, disodium hydrogen phosphate dodecahydrate, water for injections and sodium hydroxide.

The container/closure system consists of Type 1 hydrolytic glass vials closed with chloro-butyl rubber stoppers and sealed with aluminium caps. The particulars of the containers and controls performed are provided and conform to the regulation.

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

The inactivation process and the detection limit of the control of inactivation are correctly validated.

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

[1] SPC – Summary of product Characteristics.
[2] Efficacy – The production of a desired or intended result.

II.B. Method of Preparation of the Product

The product is manufactured fully in accordance with the principles of good manufacturing practice from a licensed manufacturing site. The manufacturing method consists of cell culture, harvest, concentration and inactivation of virus.

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 inactivated equine herpes virus 1, an established active substance. The active substance is manufactured in accordance with the principles of good manufacturing practice.

Starting materials of non-biological origin used in production comply with certificates of analysis.

Biological starting materials used are in compliance with the relevant Ph. Eur. Monographs and guidelines and are appropriately screened for the absence of extraneous agents according to the Ph. Eur.

The master and working seeds have been produced according to the Seed Lot System as described in the relevant guideline.

II.C.4. Substances of Biological Origin

Scientific data and/or certificates of suitability issued by the EDQM have been provided and compliance with the Note for Guidance on Minimising the Risk of Transmitting Animal Spongiform Encephalopathy Agents via Human and Veterinary Medicinal Products has been satisfactorily demonstrated.

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

The tests performed during production are described and the results of 3 consecutive runs, conforming to the specifications, are provided.

II.E. Control Tests on the Finished Product

The tests performed on the final product conform to the relevant requirements; any deviation from these requirements is justified. The tests are: description, pH, viscosity, potency/identification of EHV-1 antigen, thiomersal content, extractable volume, air tightness, inactivation of the residual live virus and sterility.

The demonstration of the batch to batch consistency is based on the results of 3 batches produced according to the method described in the dossier. Other supportive data provided confirm the consistency of the production process.

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.

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.

The in-use shelf-life of the broached vaccine is supported by the data provided.

G. Other Information

Shelf life of the veterinary medicinal product as packaged for sale: 18 months.
Shelf life after first opening the immediate packaging: 10 hours.

Store and transport refrigerated (2°C-8°C).
Protect from light.

III. SAFETY ASSESSMENT

All laboratory safety studies used the same batch with a titre of 8.6 $\log_{10}$ $TCID_{50}$ per ml (pre-inactivation equivalent), which is the proposed maximum antigen content for the monovalent product.

The batches used in mares and foals in the field studies, all contained 8.4 $\log_{10}$ $TCID_{50}$ equivalent per dose, which is near to the proposed maximum antigen content. Animals received the recommended primary course.

Laboratory trials

The safety of the administration of one dose, and the repeated administration of one dose in the target animal is demonstrated. The investigation was performed according to the recommendations of Directive 2001/82/EC as amended and the relevant guidelines. The safety was demonstrated after its repeated administration to the most sensitive of target animal categories.

Effects on reproductive performance were examined in each trimester. No complications were observed during parturition and all foals were born healthy and viable. No influence on gestation, birth or progeny was observed.

There are no data suggesting that this product might adversely affect the immune system of the vaccinated animal or its progeny therefore a specific study was not carried out.

The vaccine is inactivated and thus the specific tests to be performed for live vaccines are not applicable.

Field studies

Field studies were conducted in mares and foals of minimum age (6 months old) at horse breeding farms. The findings in the laboratory studies were confirmed by the field studies, as transient increases in mean rectal temperature were observed. The increase was within the range stated in the SPC. Adverse reactions seen in post-marketing surveillance saw more severe reactions which are reflected in the SPC.

Ecotoxicity

The applicant provided a Phase 1 environmental risk assessment in compliance with the relevant guideline which showed that no further assessment is required. The assessment concluded that the product is extensively metabolised in the treated animal. No warnings are therefore 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.

IV. CLINICAL ASSESSMENT (EFFICACY)

Clinical Studies

Laboratory Trials

The efficacy of the product has been demonstrated in laboratory studies in accordance with the relevant requirements.

A challenge model was used and considered validated. Efficacy parameters monitored included clinical signs, rectal temperatures, excretion of the challenge virus and blood samples.

Onset of Immunity

Two challenge studies were performed to determine the onset of immunity at the proposed minimum antigen input. Onset of immunity in foals was shown using 2 doses separated by 28 days, followed by a challenge 14 days after the second dose with heterologous challenge virus. In pregnant mares, 3 doses were given followed by a challenge 21 days after the third dose.

The onset of immunity for active immunisation of horses to reduce clinical signs and to reduce virus excretion is 2 weeks after the second vaccine injection.

The onset of immunity for active immunisation of pregnant mares to reduce the occurrence of abortions is 3 weeks after the third vaccine injection.

Duration of Immunity

Two challenge studies were performed to determine the duration of immunity at the proposed minimum antigen input. Duration of immunity in minimum age foals was shown using the recommended schedule of 3 doses, with the second dose

28 days after the first dose and the third dose 3 months later followed by challenge with heterologous challenge virus. Duration in pregnant mares was investigated by serology following single dose revaccination in the field.

Duration of immunity for active immunisation of horses to reduce clinical signs and to reduce virus excretion has only been demonstrated after the administration of three vaccine injections and is concluded to be 6 months from the third administration.

Duration of immunity for active immunisation of pregnant mares to reduce the occurrence of abortions, has limited data but is accepted to be until the end of pregnancy.

Field Trials

In order to assess the efficacy in field conditions, foals and pregnant mares at three breeding sites each were studied after vaccination with a related polyvalent vaccine.

In pregnant mares that had received the recommended primary course the boosting effect of a single dose after 6 months was followed by serology.

In foals that had received the recommended primary course, the serological response was monitored. The level of antibodies in the vaccinated foals was significantly higher after administrated of the vaccine than in the unvaccinated control group.

The field studies confirmed the laboratory efficacy studies.

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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