MINISTERIO DE SANIDAD
agencia española de medicamentos y productos sanitarios

DEPARTAMENTO DE MEDICAMENTOS VETERINARIOS

Agencia Española de Medicamentos y Productos Sanitarios

C/Campezo 1, Edificio 8
28022 – Madrid
España
(Reference Member State)

PUBLICLY AVAILABLE ASSESSMENT REPORT FOR A VETERINARY MEDICINAL PRODUCT

Cadorex 100 mg/ml solution for use in drinking water for pigs and chickens

CORREO ELECTRÓNICO
mresvet@aemps.es

C/ CAMPEZO, 1 – EDIFICIO 8
28022 MADRID
TEL: 91 822 54 01
FAX: 91 822 5443

Código de campo cambiado

PRODUCT SUMMARY

EU procedure number	ES/V/0445/V/DC
Name, strength and pharmaceutical form	Cadorex 100 mg/ml solution for use in drinking water for pigs and chickens
Applicant	Industrial Veterinaria S.A
Active substance(s)	Florfenicol
ATC vetcode	QJ01BA90
Target species	Pig, chicken
Indication for use	Pig: Treatment and metaphylaxis of respiratory infections caused by florfenicol susceptible bacteria such as: Pleuropneumonia (Actinobacillus pleuropneumoniae), atrophic rhinitis (Pasteurella multocida, Bordetella bronchiseptica), Glasserella parasuis infections, enzootic bronchopneumonia (Mycoplasma hyopneumoniae) and Streptococcus suis infections. The presence of the disease in the group must be established before the product is used. Chicken: Treatment of infections caused by florfenicol susceptible bacteria such as: Staphylococcus spp., E. coli, Ornithobacterium rhinotracheale, Pasteurella spp.; acute catarrh conditions of the upper respiratory tract and other diseases caused by pathogens susceptible to florfenicol.

PRODUCT INFORMATION

The Summary of Product Characteristics (SPC), the labelling and package leaflet for this veterinary medicinal product (VMP) is available in the Union Product Database (UPD).

SUMMARY OF ASSESSMENT

Legal basis of original application*	Hybrid application in accordance with Article art.19 of Regulation (EU) 2019/6 as amended.
Reference product (RP)	Floron Oral Solution 100 mg/ml Roztwór do podania w wodzie do picia
Marketing authorisation holder	KRKA d.d. Novo mesto
MS where the RP is or has been authorised	PL
Marketing authorisation number EU procedure number	1581
Date of authorisation	29-04-2004
Proprietary data have been submitted for the following part of the dossier	Indication: “metaphylaxis of respiratory infections caused by florfenicol susceptible bacteria such as: Pleuropneumonia (Actinobacillus pleuropneumoniae), atrophic rhinitis (Pasteurella multocida, Bordetella bronchiseptica), Glasserella parasuis infections, enzootic bronchopneumonia (Mycoplasma hyopneumoniae) and Streptococcus suis infections” Qualified for data protection: no
Date of completion of the original decentralised procedure	01/10/2025
Date veterinary medicinal product first authorised in the Reference Member State (MRP only)	-
Concerned Member States for original procedure	CZ, EL, HU, IT, PL, PT, RO
Concerned Member States for subsequent recognition procedure	-
Withdrawn CMS during original decentralised procedure	-

*Please be aware that certain parts of the dossier may be varied and consequently be subject to protection of technical documentation – for these and other changes of referenceability to parts of the dossier, please see chapter POST-AUTHORISATION PROCEDURES

1. SCIENTIFIC OVERVIEW

The veterinary medicinal product (VMP) is produced and controlled using validated methods and tests, which ensure the consistency of the VMP released on the market.

It has been shown that the VMP can be safely used in the target species; the reactions observed are indicated in the SPC.

The VMP 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 VMP was demonstrated according to the claims made in the SPC.

The overall risk/benefit analysis is in favour of granting a marketing authorisation.

2. QUALITY DOCUMENTATION (physicochemical, biological or microbiological information)

2.A. Product description

The VMP contains florfenicol (100 mg/ml) and the excipient polyethylene glycol 200.

The container/closure system is 1 L and 5 L high density polyethylene (HDPE) containers closed with a sealing foil and HDEP cap.

The choice of the formulation is justified.

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

2.B. Description of the manufacturing method

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

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

2.C. Production and control of starting materials

The active substance is florfenicol, an established active substance not described in any pharmacopeia. 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.

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

2.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 VMP.

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.

2.F. Stability tests

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 VMP throughout its shelf life when stored under the approved conditions.

2.G. Other information

None.

3. SAFETY DOCUMENTATION (safety and residues tests)

As this is a hybrid application according to Article 19 of Regulation (EC) 2019/6 and bioequivalence with a reference VMP has been demonstrated, results of safety tests are not required

The safety aspects of this VMP are essential similar to the reference VMP.

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

3.A. Safety tests

As this is a hybrid application according to Article 19 of Regulation (EC) 2019/6 and bioequivalence with a reference VMP has been demonstrated the safety profile of the reference product can be assumed.

User safety

The applicant has provided a user safety assessment in compliance with the relevant guideline, which shows that the main user of this veterinary medicinal product is a professional user.

The worst-case scenario for user safety is dermal contact from an acute exposure. Other potential concerns include repeated dermal contact as well accidental ingestion due to hand to mouth exposure, including adverse effects on male fertility.

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

Environmental Risk Assessment

The application for marketing authorisation of Cadorex 100 mg/ml solution for use in drinking water for pigs and chickens is exempt from submitting an Environmental Risk Assessment (ERA) according to Article 18(7) of Regulation (EU) 2019/6 as an ERA has already been performed for the same active substance and exposure level in the EU in accordance with VICH GL38 ("Guideline on environmental impact assessment for veterinary medicinal products - Phase II" [CVMP/VICH/790/03-FINAL]). Therefore, as there are similar products already authorized in the EU after October 2005 (EMA/CVMP/ERA/622045/2020), a complete data package for environmental risk assessment is not required. No unacceptable environmental risk is expected when the product is used, handled and disposed according to the information included in the SPC.

3.B. Residues documentation

Residue tests

No residue depletion studies were conducted on the basis that bioequivalence with the reference product has been demonstrated.

Maximum Residue Limits

Florfenicol is included in Table 1 of the Annex to Commission Regulation (EU) No 37/2010 as follows:

Pharmacologically active substance(s)	Marker residue	Animal species	MRLs (µg/kg)	Target tissues	Other provisions
Florfenicol	Sum of florfenicol and its metabolites measured as florfenicol-amine	Bovine, ovine, caprine	200 µg/kg 3000 µg/kg 300 µg/kg	Muscle Liver Kidney	Not for animals from which milk is produced for human consumption. Not for animals from which eggs are produced for human consumption.
		Porcine	300 µg/kg 500 µg/kg 2000 µg/kg 500 µg/kg	Muscle Skin and fat Liver Kidney	
		Poultry	100 µg/kg 200 µg/kg 2500 µg/kg 750 µg/kg	Muscle Skin and fat Liver Kidney	
		Fin fish	1000 µg/kg	Muscle and skin in natural proportions.	
		All other food producing species	100 µg/kg 200 µg/kg 2000 µg/kg 300 µg/kg	Muscle Fat Liver Kidney	

Withdrawal Periods

Based on the data provided above, a withdrawal period of 20 days for meat and offal in pig and 8 days for meat and offal in chicken are justified. In addition, it is not for use in birds producing or intended to produce eggs for human consumption.

4. EFFICACY DOCUMENTATION (preclinical studies and clinical trials)

This is a hybrid application according to Article 19 of Regulation (EC) 2019/6 and bioequivalence with a reference VMP has been demonstrated.

The efficacy claims for this VMP are mostly equivalent to those of the reference VMP. However, due to the addition of metaphylaxis indication for pig respiratory disease, a clinical field study was conducted to justify this indication against swine respiratory disease at the proposed dose.

Furthermore, required data were provided on resistance mechanisms and updated data on the current situation of resistance to florfenicol in the relevant pathogens.

4.A. Pre-Clinical Studies

Pharmacology

No additional data were provided, since bioequivalence with the reference VMP was demonstrated.

Development of resistance and related risk in animals

The applicant provided bibliographic data in order to update the situation on antimicrobial resistance to florfenicol in the target pathogens.

The bibliography provided suggests that there seem not to be a concern with the resistance level to florfenicol in the target pathogens for this product.

Adequate warnings and precautions appear on the product literature.

Dose determination and confirmation

No dose determination/confirmation studies were provided, since bioequivalence with the reference VMP was demonstrated.

Tolerance in the target species of animals

The applicant provided bibliographic data to further address the tolerance of florfenicol administered in drinking water in chicken and pigs.

The safety of the candidate product was also evaluated in the clinical study conducted to support the metaphylactic effect in pigs.

The product literature accurately reflects the type and incidence of adverse effects, which might be expected.

4.B. Clinical trials

The applicant conducted a GCP-compliant, randomised, blinded, positive-controlled clinical trial in order to support the metaphylactic efficacy of the product in piglets with swine respiratory disease. The study was considered to be adequately designed. The animals and farms were appropriately selected to be included in the clinical trial. Clinical evaluation of the animals was based on a scoring system assessing the presence and severity of respiratory clinical signs. The efficacy evaluation was based on the proportion of piglets included in the study that remained healthy until the end of the study. Secondary efficacy criteria and bacteriological evaluation were also conducted. The overall efficacy for the metaphylactic effect was comparable in both treatment groups (IVP and control group) with no significant statistical difference.

The results from this study allowed to conclude on the demonstration of the metaphylactic efficacy of the product for the respiratory infections included in the indications.

5. OVERALL CONCLUSION AND BENEFIT-RISK ASSESSMENT

The data submitted in the dossier demonstrate that when the VMP 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 VMP for humans and the environment is acceptable.

POST-AUTHORISATION PROCEDURES

The SPC and package leaflet may be updated to include new information on the quality, safety and efficacy of the VMP. The current SPC is available in the Union Product Database (UPD).

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 VMP.

None.