Paul-Ehrlich-Institut

Beurteilungsbericht zur Veröffentlichung

(gemäß § 31 Abs. 2 Tierimpfstoff-Verordnung)

Versifel FeLV

Zulassungsdatum:	19.11.2010
Zulassungsnummer:	PEI.V.11457.01.1
Datum der Erstellung des öffentlichen Beurteilungsberichts:	01.11.2025
Datum der Bekanntgabe beim Antragsteller der/des Zulassungsänderung/Widerrufs, Rücknahme, Anordnung des Ruhens der Zulassung:	-

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MUTUAL RECOGNITION PROCEDURE

PUBLICLY AVAILABLE ASSESSMENT REPORT FOR A VETERINARY MEDICINAL PRODUCT

Versifel FeLV

PRODUCT SUMMARY

EU Procedure number	DE/V/0254/001/MR
Name, strength and pharmaceutical form	Versifel FeLV, suspension for injection
Applicant	Zoetis Deutschland GmbH Leipziger Platz 18 10117 Berlin Germany
Active substance(s)	Inactivated Feline Leukaemia Virus (FeLV) subtypes A, B and C (Kawakami-Theilen strain) including gp70 sub-unit antigen, inducing anti-gp70 antibodies GMT ≥ 8.1 Log_2^* *As determined by mouse potency test (anti-gp70 antibodies, GMT denotes: geometric mean titre) <u>Adjuvants:</u> Quil A 20 µg Cholesterol 20 µg DDA (Dimethyl-dioctadecyl ammonium bromide) 10 µg Carbopol 0.5 mg
ATC Vetcode	QI06AA01
Target species	Cats
Indication for use	For active immunisation of susceptible cats from 9 weeks of age to reduce the number of cats infected with FeLV and presenting clinical signs of the related disease. No data are available in the studies to demonstrate protection against related clinical disease but prevention of infection is associated with protection against related clinical disease.

PRODUCT INFORMATION

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

SUMMARY OF ASSESSMENT

Legal basis of mutual recognition application	Mutual recognition application in accordance with Article 31 of Directive 2001/82/EC as amended.
Date of completion of the mutual recognition procedure	25.07.2012
Date product first authorised in the Reference Member State	19.11.2010
Concerned Member States for mutual recognition procedure	AT, BE, CY, EL, ES, FR, HU, IE, IT, LU, PL, PT, UK (NI)

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; the slight reactions observed are indicated in the SPC (Summary of Product Characteristics).
The product is safe for the user and for the environment, when used as recommended. 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.

2. QUALITY DOCUMENTATION

2.A. Product description

Composition per 1 ml dose:

Each 1 ml dose of Versifel FeLV contains the following:

Active substance:

Inactivated Feline Leukaemia Virus (FeLV) subtypes A, B and C (Kawakami-Theilen strain) including gp70 sub-unit antigen, inducing anti-gp70 antibodies	GMT ≥ 8.1 Log_2^*

*As determined by mouse potency test (anti-gp70 antibodies, GMT denotes: geometric mean titre)

Adjuvants:

Quil A	20 µg
Cholesterol	20 µg
DDA (Dimethyl-dioctadecyl ammonium bromide)	10 µg
Carbopol	0.5 mg

Container/closure system:
The vaccine is filled in 3 ml glass type I containers.
The vials are closed with a pharmaceutical grade rubber stopper and an aluminium cap. The particulars of the containers and controls performed are provided and conform to the regulations of Monograph 3.2.1 of the European Pharmacopoeia (Ph.Eur.).

The choice of the adjuvants (Quil A, Cholesterol, DDA, Carbopol) and the vaccine strain (Kawakami-Theilen strain) 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.

2.B. Description of the manufacturing method

The product is manufactured fully in accordance with the principles of Good Manufacturing Practice (GMP) from a licensed manufacturing site. Corresponding manufacturing licences and GMP certificates are provided.

Process validation data on the product have been presented in accordance with the relevant European guidelines.
The product is manufactured in accordance with the European Pharmacopoeia and relevant European guidelines.

2.C. Production and control of starting materials

Starting materials of non-biological origin used in production comply with the pharmacopoeia monograph specifications.
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 “Table of extraneous agents to be tested for in relation to the general and species-specific guidelines on production and control of mammalian veterinary vaccines” (Note for Guidance III/3427/93, 7Blm10a).
Seed lots and cell bank have been produced as described in the relevant guideline.

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.

2.D. Control tests during the manufacturing process

The tests performed during production are described in detail.

These tests are as follows:

Tests on harvested antigen fluids before inactivation
- sterility
- test for mycoplasma
- determination of virus titre

Tests on inactivated antigen fluids before concentration
- sterility
- identification and gp70 antigen content
- inactivation (residual live virus)
- residual sodium thiosulphate

Tests on inactivated antigen fluids after concentration
- sterility
- gp70 antigen content

2.E. Control tests on the finished product

The tests performed on the final product conform to the relevant requirements.

The following tests are performed:
- appearance
- sterility: according to Ph.Eur. 2.6.1
- pH determination
- identity of FeLV antigen
- potency

2.F. Batch-to-batch consistency

The demonstration of the batch to batch consistency is based on the results of three batches produced according to the method described in the dossier.

2.G. Stability

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 (2 years) when stored under the approved conditions (at 2-8°C).
The vaccine must be used immediately after broaching.

3. SAFETY DOCUMENTATION

Versifel FeLV is a third generation inactivated Feline Leukaemia vaccine to reduce the number of cats infected with FeLV and presenting clinical signs of the related disease.
This vaccine contains Quil A, Cholesterol, DDA (Dimethyl-dioctadecyl ammonium bromide) and Carbopol as adjuvants. The suspension for injection is administered subcutaneously. Cats from an age of 9 weeks can be vaccinated.

3.B. Pre-clinical studies

The trials have been performed in the target species (cat).
All animals used were seronegative to FeLV antigen.

The safety of the administration of one dose, an overdose (double dose) and the repeated administration of one dose in the target animal (cat) was demonstrated in a laboratory trial (involving 5 groups totalising 44 vaccinated animals and including a control group).

The animals were allocated to different groups and were administered either a single dose, an overdose or repeat single doses with an interval of several weeks. Unvaccinated animals were used as control group. All animals were monitored for local and systemic reactions during the study.
Overall, the vaccine Versifel FeLV proved to be well tolerated in the target species cat. The local and systemic reactions as well as the increase in rectal temperature observed are described in the SPC (Summary of Product Characteristics) and package leaflet under “adverse reactions”.
The investigation was performed according to the recommendations of Directive 2001/82/EC as amended and the relevant guidelines.

No investigation of effect on reproductive performance was conducted because neither the FeLV antigen nor any of the excipients are thought to be associated with any pathological effects on the reproductive system of male or non-pregnant females. Furthermore, the vaccine is inactivated. The use of this vaccine therefore poses no obvious risk to reproductive performance. As no safety studies have been conducted in pregnant cats, this is reflected in the SPC and package leaflet.

Versifel FeLV is an inactivated vaccine. There is no reason to suppose that it might adversely affect immunological functions of the recipient. Therefore, no specific studies to examine the effect on immunological functions have been carried out.
Some supporting serological data are, however, available which provide some evidence that the inactivated FeLV antigen does not adversely affect the immunological function or cause immunosuppression.

After vaccination, anaphylactic shock may occur. This is also described in the SPC and package leaflet.

Safety and efficacy data are available which demonstrate that this vaccine can be either mixed with Zoetis' Versifel CVR and administered at a single site or administered on the same day as Zoetis' Versifel CVR but at different sites.
No data are available on the duration of immunity of Versifel FeLV when administered together with Versifel CVR. This should be taken into account when considering re-vaccination intervals. This is clearly indicated in the SPC and package leaflet.

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

3.C. Clinical trials

Field studies, involving 182 vaccinated animals and 67 control animals, were performed to assess the safety of the vaccine Versifel FeLV.
Cats of different breeds, genders and ages were vaccinated with Versifel FeLV according to the vaccination scheme. All animals were observed for local or systemic reactions during the studies.
Overall, the vaccine Versifel FeLV proved to be well tolerated in the target species cat. The results confirm the observations made in the laboratory studies. The local and systemic reactions observed are described in the SPC and package leaflet under "adverse reactions".

3.D. Environmental Risk Assessment

The applicant provided an environmental risk assessment which showed that the risk for the environment and other animals and species posed by this vaccine can be considered as very low.
No warnings are therefore required in the SPC and package leaflet.

4. EFFICACY DOCUMENTATION

4.B Pre-clinical studies

The efficacy of the product has been demonstrated in laboratory studies in accordance with the following Ph.Eur. monograph:

Vaccinum leucosis felinae inactivatum: monograph 1321

The efficacy in the target species cat was demonstrated by means of challenge trials using a heterologous challenge strain. In these trials (4 supportive studies), a total of 64 seronegative animals at the minimum vaccination age of 9 weeks were vaccinated with Versifel FeLV and challenged with virulent feline Leukaemia virus. Unvaccinated animals served as controls.
The results clearly demonstrate the efficacy of Versifel FeLV.

The following conclusions can be drawn from the results of the laboratory studies concerning onset and duration of immunity, indications for use and immunisation scheme:

Regarding the indications, the data are showing that the vaccine is able to lead to active immunisation of susceptible cats from 9 weeks of ages to reduce the number of cats infected with FeLV. Protection against clinical signs has not been demonstrated in studies but published data (McClelland et al 1980) is supporting the relation between absence of infection and protection against clinical signs.

Onset of immunity occurs within four weeks of the completion of the primary vaccination course (75% protection is achieved in the corresponding study).

The duration of immunity is at least one year after the primary course and three years after the booster. Taking into account the age related resistance, 82 to 100% protection is achieved in the corresponding studies.

No data about the efficacy in presence of maternal derived antibodies is available. An appropriate warning is included in the SPC.

Vaccination scheme:

Primary vaccination:
Two doses should be administered subcutaneously to cats from nine weeks of age, with an interval of 3-4 weeks between doses.

Re-vaccination:
A single booster dose should be administered 1 year after the completion of the primary vaccination course. Thereafter a single booster dose should be administered to cats once every 3 years.

For concurrent vaccination with Zoetis' Versifel CVR, a single dose of Versifel FeLV should be administered as described above. A single dose of Zoetis' Versifel CVR should then be administered at a separate site via the subcutaneous route.

For simultaneous vaccination with Zoetis' Versifel CVR, the contents of a single vial of Zoetis' Versifel CVR should be reconstituted with the contents of a single vial of Versifel FeLV in place of the diluent. Once mixed, the contents of the vial should appear as a slightly coloured (pink/orange) opaque suspension. The mixed vaccines should be injected immediately via the subcutaneous route.

4.C. Clinical trials

The applicant has conducted field studies on the efficacy of Versifel FeLV involving 182 vaccinated animals and 67 control animals.

Cats of different breeds, genders and ages were vaccinated with Versifel FeLV according to the vaccination scheme. All animals were regularly bled during the study to determine antibodies to FeLV. The animals were also tested for FeLV p27 antigenaemia. The results confirm the observations made in the laboratory studies. The vaccine Versifel FeLV proved to be efficacious (to enhance antibody response) in the target species cat.

5. 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.

POST-AUTHORISATION PROCEDURES

Sequence of significant variations

Summary of change (Application number)	Approval date
Renewal (DE/V/0254/001/R/001)	22 October 2015
Changes in the batch potency test (DE/V/0254/001/Ib/010)	19 April 2016
Changes in the batch potency test (DE/V/0254/001/II/007)	31 January 2019
Alignment of the product information of the vaccine Versifel FeLV with version 9.0 of the QRD template (DE/V/0254/001/A/016)	05 October 2023