1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Veraflox 25 mg/ml oral suspension for cats

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Active substance:

Pradofloxacin 25 mg

Excipients:

Preservative: Sorbic acid (E200) 2 mg

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Oral suspension.

Yellowish to beige suspension.

4. CLINICAL PARTICULARS

4.1 Target species

Cats

4.2 Indications for use, specifying the target species

Treatment of:

- acute infections of the upper respiratory tract caused by susceptible strains of *Pasteurella multocida*, *Escherichia coli* and the *Staphylococcus intermedius* group (including *S. pseudintermedius*).
- wound infections and abscesses caused by susceptible strains of *Pasteurella multocida* and the *Staphylococcus intermedius* group (including *S. pseudintermedius*).

4.3 Contraindications

Do not use in cases of hypersensitivity to the active substance or to any of the excipients.

Due to the lack of data, pradofloxacin should not be used in kittens aged less than 6 weeks.

Pradofloxacin has no effects on the developing cartilage of kittens of 6 weeks of age and older. However the product should not be used in cats with persisting articular cartilage lesions, as these lesions may worsen during treatment with fluoroquinolones.

Do not use in cats with central nervous system (CNS) disorders, such as epilepsy, as fluoroquinolones could potentially cause seizures in predisposed animals.

Do not use in cats during pregnancy and lactation (see section 4.7).

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

Special precautions for use in animals

Whenever possible, the veterinary medicinal product should only be used based on susceptibility testing.

Official and local antimicrobial policies should be taken into account when the veterinary medicinal product is used.

Fluoroquinolones should be reserved for the treatment of clinical conditions which have responded poorly, or are expected to respond poorly, to other classes of antimicrobials.

Use of the veterinary medicinal product deviating from instructions given in the SPC may increase the prevalence of bacteria resistant to the fluoroquinolones and may decrease the effectiveness of treatment with other fluoroquinolones due to the potential for cross-resistance.

Pradofloxacin may increase sensitivity of the skin to sunlight. During treatment, animals should therefore not be exposed to excessive sunlight.

Special precautions to be taken by the person administering the veterinary medicinal product to animals

Due to potential harmful effects, the bottles and the filled syringes must be kept out of the sight and reach of children.

People with known hypersensitivity to quinolones should avoid any contact with the veterinary medicinal product.

Avoid skin and eye contact with the veterinary medicinal product. Wash hands after use.

In case of accidental contact with the eyes, wash immediately with water.

In case of contact with the skin, rinse off with water.

Do not eat, drink or smoke while handling the veterinary medicinal product

In case of accidental ingestion, seek medical advice and show the package leaflet or the label to the physician.

4.6 Adverse reactions (frequency and seriousness)

Mild transient gastro-intestinal disturbances including vomiting have been observed in rare cases.

The frequency of adverse reactions is defined using the following convention:
- very common (more than 1 in 10 animals treated displaying adverse reaction(s)
- common (more than 1 but less than 10 animals in 100 animals treated)
- uncommon (more than 1 but less than 10 animals in 1,000 animals treated-)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)
- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

4.7 Use during pregnancy, lactation or lay

The safety of this veterinary medicinal product has not been established during pregnancy and lactation.

Pregnancy:
Do not use during pregnancy. Pradofloxacin induced eye malformations at foetal and maternal toxic dosages in rats.

Lactation:
Do not use during lactation since there are no data on pradofloxacin in kittens aged less than 6 weeks. Fluoroquinolones are known to cross the placenta and to be distributed into milk.

Fertility:
Pradofloxacin has been shown to have no effects on fertility in breeding animals.

4.8 Interaction with other medicinal products and other forms of interaction

Concurrent administration with metal cations such as those contained in antacids or sucralfate made with magnesium hydroxide or aluminium hydroxide, or multivitamins containing iron or zinc, and dairy products containing calcium, has been reported to decrease the bioavailability of fluoroquinolones. Therefore, Veraflox should not be administered concurrently with antacids, sucralfate, multivitamins or dairy products, as absorption of Veraflox may be decreased. Further, fluoroquinolones should not be used in combination with non-steroidal anti-inflammatory drugs (NSAIDs) in animals with a history of seizures because of potential pharmacodynamic interactions in the CNS. The combination of fluoroquinolones with theophylline could increase the plasma levels of theophylline by altering its metabolism and thus should be avoided. The combined use of fluoroquinolones with digoxin should also be avoided because of potentially increased oral bioavailability of digoxin.

4.9 Amounts to be administered and administration route

Oral use.

Doses

The recommended dose is 5 mg/kg bodyweight of pradofloxacin once daily. Due to the graduation of the syringe the resulting dose range is 5 to 7.5 mg/kg bodyweight according to the following table:

Bodyweight of Cat (kg)	**Dose of Oral suspension to be given (ml)**	**Pradofloxacin dose (mg/kg bw)**
> 0.67 - 1	0.2	5 – 7.5
1 – 1.5	0.3	5 – 7.5
1.5 – 2	0.4	5 – 6.7
2 – 2.5	0.5	5 – 6.3
2.5 – 3	0.6	5 – 6
3 – 3.5	0.7	5 – 5.8
3.5 – 4	0.8	5 – 5.7
4 – 5	1	5 – 6.3
5 – 6	1.2	5 – 6
6 – 7	1.4	5 – 5.8
7 – 8	1.6	5 – 5.7
8 – 9	1.8	5 – 5.6

9 – 10	2	5 – 5.6

To ensure a correct dose, bodyweight should be determined as accurately as possible to avoid under dosing.

To facilitate accurate dosing, the 15 ml bottle of Veraflox oral suspension is supplied together with a 3 ml oral dosing syringe (graduation: 0.1 to 2 ml).

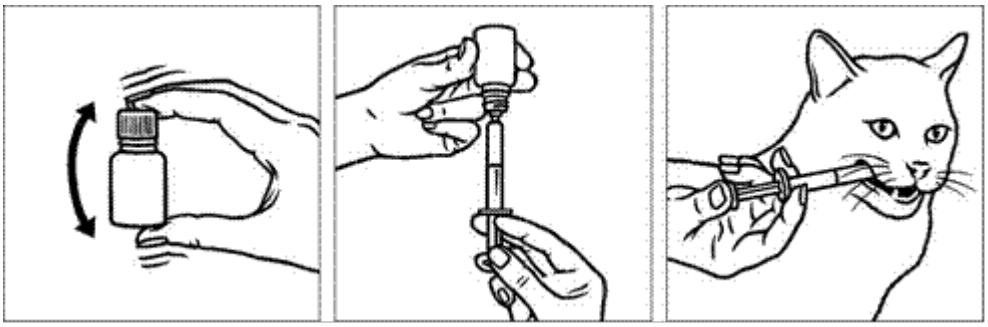
Duration of treatment

The duration of the treatment depends on the nature and severity of the infection and on the response to treatment. For most infections the following treatment courses will be sufficient:

Indication	**Duration of treatment (days)**
Wound infections and abscesses	7
Acute infections of the upper respiratory tract	5

The treatment should be reconsidered if no improvement of the clinical condition is observed within 3 days after starting the treatment.

Method of administration



Shake well before use. Draw out the equivalent dosage into the syringe. Administer directly into the mouth.

In order to avoid cross-contamination, the same syringe should not be used for different animals. Thus, one syringe should only be used for one animal. After administration, the syringe should be cleaned with tap water and stored in the carton box together with the veterinary medicinal product.

4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary

No specific antidotes for pradofloxacin (or other fluoroquinolones) are known, therefore, in case of overdose, symptomatic treatment should be given.

Intermittent vomiting was observed after repeated oral administration of 1.6 times the maximum recommended dose.

4.11 Withdrawal period(s)

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Antibacterials for systemic use, fluoroquinolones.
ATCvet code: QJ01MA97

5.1 Pharmacodynamic properties

Mode of Action
The primary mode of action of the fluoroquinolones involves interaction with enzymes essential for major DNA functions such as replication, transcription and recombination. The primary targets for pradofloxacin are the bacterial DNA gyrase and topoisomerase IV enzymes. Reversible association between pradofloxacin and DNA gyrase or DNA topoisomerase IV in the target bacteria results in inhibition of these enzymes and rapid death of the bacterial cell. The rapidity and extent of bacterial killing are directly proportional to the drug concentration.

Antibacterial Spectrum
Although pradofloxacin has *in-vitro* activity against a wide range of Gram-positive and Gram-negative organisms, including anaerobic bacteria, this veterinary medicinal product should only be used for the approved indications (see section 4.2) and in accordance with the prudent use recommendations in section 4.5 of this SPC.

MIC-Data

Bacterial species	Number of strains	MIC_{50} (µg/ml)	MIC_{90} (µg/ml)	MIC range (µg/ml)
Pasteurella multocida	323	0.016	0.016	0.002-0.062
Escherichia coli	135	0.016	4	0.008-8
Staphylococcus intermedius group (including *S. pseudintermedius*)	184	0.062	0.125	0.016-8

The bacteria were isolated between 2001 and 2007 from clinical cases in Belgium, France, Germany, Hungary, Poland, Sweden and UK.

Types and Mechanisms of Resistance
Resistance to fluoroquinolones has been reported to arise from five sources, (i) point mutations in the genes encoding for DNA gyrase and/or topoisomerase IV leading to alterations of the respective enzyme, (ii) alterations of drug permeability in Gram-negative bacteria, (iii) efflux mechanisms, (iv)plasmid mediated resistance and (v) gyrase protecting proteins. All mechanisms lead to a reduced susceptibility of the bacteria to fluoroquinolones. Cross-resistance within the fluoroquinolone class of antimicrobials is common.

5.2 Pharmacokinetic particulars

In laboratory studies the bioavailability of pradofloxacin was reduced in fed cats compared to fasted animals. However in the clinical studies feeding did not reveal any impact on the treatment effect.

After oral administration of the veterinary medicinal product to cats at the recommended therapeutic dose, absorption of pradofloxacin is rapid, reaching peak concentrations of 2.1 mg/l within 1 hour. The bioavailability of the veterinary medicinal product is at least 60%. Repeated dosing shows no impact on the pharmacokinetic profile, (accumulation index = 1.2). *In vitro* plasma protein binding is low (30%). The high volume of distribution (V_d) >4 l/kg body weight indicates good tissue penetration. Pradofloxacin is eliminated from serum with a terminal half-life of 7 hours. The major elimination pathway in cats is glucuronidation. Pradofloxacin is cleared from the body at 0.28 l/h/kg.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Amberlite IRP 64
Sorbic acid
Ascorbic acid
Xanthan gum
Propylene glycol
Vanilla flavour
Purified water

6.2 Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years
Shelf life after first opening the bottle: 3 months

6.4. Special precautions for storage

Store in the original container.
Keep the bottle tightly closed.

6.5 Nature and composition of immediate packaging

Veraflox oral suspension is supplied in two different presentations:

Folding carton containing 15 ml white high density polyethylene (HDPE) bottle with a polyethylene adapter and a child-resistant closure and a 3 ml polypropylene oral dosing syringe (graduation: 0.1 to 2 ml).

Folding carton containing 30 ml white high density polyethylene (HDPE) bottle with a polyethylene adapter and a child-resistant closure.

Not all pack sizes may be marketed.

6.6 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal product should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Bayer Animal Health GmbH
D-51368 Leverkusen
Germany

8. MARKETING AUTHORISATION NUMBER(S)

EU/2/10/107/013-014

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 12/04/2011
Date of last renewal: 07/01/2016

10. DATE OF REVISION OF THE TEXT

Detailed information on this veterinary medicinal product is available on the website of the European Medicines Agency http://www.ema.europa.eu/

PROHIBITION OF SALE, SUPPLY AND/OR USE

Not applicable.