# ANNEX I SUMMARY OF PRODUCT CHARACTERISTICS

#### 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Tolfedine 4% w/v Solution for Injection for dogs and cats

# 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

**Active substance** 

Tolfenamic acid 40 mg

**Excipients** 

Benzyl alcohol 10.4 mg

For the full list of excipients, see section 6.1.

#### 3. PHARMACEUTICAL FORM

Sterile solution for injection.

A clear colourless to slightly yellow sterile aqueous solution.

#### 4. CLINICAL PARTICULARS

# 4.1 Target species

Dogs, Cats.

# 4.2 Indications for use, specifying the target species

**In dogs**: inflammatory and painful post-operative syndromes.

In cats: adjuvant treatment of upper respiratory disease in association with antimicrobial therapy.

#### 4.3 Contraindications

Tolfenamic acid is contraindicated in case of cardiac disease.

Do not use in animals with impaired hepatic function or acute renal insufficiency.

Tolfenamic acid is contraindicated in case of ulceration or digestive bleeding, in case of blood dyscrasia or hypersensivitivy to tolfenamid acid.

Do not inject intramuscularly in cats.

#### 4.4 Special warnings for each target species

NSAIDS can cause inhibition of phagocytosis and hence in the treatment of inflammatory conditions associated with bacterial infections. Appropriate concurrent antimicrobial therapy should be instigated.

The use of insulin-type needle/syringe is advisable particularly in low-weight animals to ensure an accurate dose.

#### 4.5 Special precautions for use

## Special precautions for use in animals

Use in animals less than 6 weeks of age, or in aged animals, may involve additional risk. If such a use cannot be avoided, animals may require a reduced dosage and careful clinical management is essential. Reduced metabolism and excretion in these animals should be considered.

Avoid use in any dehydrated, hypovolemic or hypotensive animal, as there is a potential risk of increased renal toxicity.

Concurrent administration of potential nephrotoxic drugs should be avoided.

It is preferable that the product is not administered to cats undergoing general anaesthesia until fully recovered.

Do not exceed the prescribed dosage or duration of treatment. The scale of pain relief after preoperative administration may be influenced by the severity and duration of the operation.

Animals suffering from a chronic renal insufficiency and requiring an anti-inflammatory treatment may be treated with tolfenamic acid without requiring an adjustment of the dosage. However, the use of this product is contraindicated in acute cases of renal insufficiency.

In case of undesirable effects (anorexia, vomiting, diarrhoea, presence of blood in faeces) occurring during the treatment, your veterinarian should be contacted for advice and the possibility of stopping treatment should be considered.

<u>Special precautions to be taken by the person administering the veterinary medicinal product to animals</u>

Take care to avoid accidental self-injection. In case of eye or skin contact, wash immediately with water.

# 4.6 Adverse reactions (frequency and seriousness)

A temporary increase in thirst and/or diuresis may occur. In most of the cases, these signs cease spontaneously after treatment. Diarrhoea and vomiting may occur during treatment, where either persists treatment should be discontinued. Local injection site reactions have been reported following administration of this product.

#### 4.7 Use during pregnancy, lactation or lay

Do not treat pregnant animals.

# 4.8 Interaction with other medicinal products and other forms of interaction

Do not administer other NSAIDs concurrently or within 24 hours of each other. Some NSAIDs may be highly bound to plasma proteins and compete with other highly bound drugs, which can lead to toxic effects.

#### 4.9 Amounts to be administered and administration route

The recommended dose is 4 mg/kg bodyweight. That is a single injection of 1 ml/10 kg, repeated once after 24 hours if required (1 ml/10 kg) or a single injection of 1 ml/10 kg, the treatment being continued by the oral route, using tablets.

In dogs administer by intramuscular or subcutaneous injection. For the treatment of post-operative pain, this is best given pre-operatively, either at the time of pre-medication or induction of anaesthesia.

In cats by the subcutaneous route only.

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

In case of overdose, administer a symptomatic treatment.

#### 4.11 Withdrawal period(s)

Not applicable.

#### 5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Non-steroidal anti-inflammatory and antirheumatic products, Fenamates ATC vet code: QM01AG02

#### 5.1 Pharmacodynamic properties

Tolfenamic acid (N-(2-methyl-3-chlorophenyl) anthranilic acid) is a non-steroidal anti-inflammatory drug belonging to the fenamate group. Tolfenamic acid possesses anti-inflammatory, analgesic and antipyretic properties.

The anti-inflammatory activity of tolfenamic acid is due to inhibition of cyclooxygenase leading to a reduction in prostaglandin and thromboxane synthesis, major inflammatory mediators.

# 5.2 Pharmacokinetic particulars

The pharmacokinetics of tolfenamic acid have been investigated in laboratory animals, in man and in the target species, dogs and cats.

# Absorption:

In the dog, tolfenamic acid is readily absorbed by injectable administration. By injection, maximum plasma concentrations of about 4 mcg / ml (s.c.) and about 3 mcg / ml (i.m.) are obtained 2 hours after administration at 4 mg / kg.

In cat, absorption is quite rapid. By injection, a peak of 3.9 mcg / ml is obtained within 1 hour of administration at 4 mg / kg.

# **Distribution, metabolism, excretion**:

In the dog and cat, over 99% of tolfenamic acid is bound to plasma proteins.

The metabolic fate of tolfenamic acid has been studied in the rat, rabbit, dog and in man. The extent of metabolism depends on the species concerned. In the rat, man and the rabbit, the main metabolites are two hydroxy-metabolites. On the contrary, in the dog, there is no formation of hydroxy-metabolites, only tolfenamic acid and its conjugate with glucuronic acid are found in urine.

The hydroxylated metabolites and their conjugates are mainly excreted by the kidneys. The unchanged tolfenamic acid and its glucuronides are predominantly excreted into the bile. Moreover, tolfenamic acid undergoes an intensive enterohepatic recycling.

Tolfenamic acid is distributed to all organs with high concentrations in plasma, digestive tract, liver, lungs and kidneys. The concentration in the brain however is low.

Tolfenamic acid and its metabolites do not cross the placental barrier to any great extent.

In dogs with renal insufficiency, the elimination of tolfenamic acid is unchanged and accumulation does not occur.

#### 6. PHARMACEUTICAL PARTICULARS

#### 6.1 List of excipients

Benzyl alcohol Ethyl digol Ethanolamine Water for injections

## 6.2 Major incompatibilities

None known.

#### 6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years. Shelf life after first opening the immediate packaging: 28 days.

#### **6.4.** Special precautions for storage

This veterinary medicinal product does not require any special storage conditions.

# 6.5 Nature and composition of immediate packaging

Cardboard box with 1 amber Type I glass vial of 10ml, with a chlorobutyl rubber bung with aluminium overseal with or without flip top cap.

# 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

Vetoquinol Ireland Limited 12 Northbrook Road Ranelagh Dublin 6

#### 8. MARKETING AUTHORISATION NUMBER(S)

VPA 10983/019/001

# 9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 12<sup>th</sup> August 1993 Date of last renewal:11<sup>th</sup> August 2008

# 10 DATE OF REVISION OF THE TEXT