

## **SUMMARY OF PRODUCT CHARACTERISTICS**

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

Extrontel Plus Tablets For Dogs

### **2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each tablet contains:

**Active substances:**

Praziquantel	50mg
Pyrantel	50mg (equivalent to 144 mg pyrantel embonate)
Febantel	150mg

**Excipients:**

For a full list of excipients, see section 6.1.

### **3. PHARMACEUTICAL FORM**

Tablet

A pale yellow tablet with a cross breakline on one side.  
The tablets can be divided into halves or quarters.

### **4. CLINICAL PARTICULARS**

#### **4.1 Target species**

Dogs.

#### **4.2 Indications for use, specifying the target species**

In dogs: Treatment of mixed infections by nematodes and cestodes of the following species

**Nematodes:**

**Ascarids:** *Toxocara canis*, *Toxascaris leonina* (adult and late immature forms).

**Hookworms:** *Uncinaria stenocephala*, *Ancylostoma caninum* (adults).

**Whipworms:** *Trichuris vulpis* (adults).

**Cestodes:**

**Tapeworms:** *Echinococcus* species, (*E. granulosus*, *E. multilocularis*), *Taenia* species, (*T. hydatigena*, *T. pisiformis*, *T. taeniformis*), *Dipylidium caninum* (adult and immature forms).

### **4.3 Contraindications**

Do not use simultaneously with piperazine compounds.

Do not use in animals with a known sensitivity to the active ingredients or to any of the excipients.

### **4.4 Special warnings for each target species**

Fleas serve as intermediate hosts for one common type of tapeworm – *Dipylidium caninum*. Tapeworm infestation is certain to reoccur unless control of intermediate hosts such as fleas, mice, etc. is undertaken.

Tapeworm infestation is unlikely in pups less than 6 weeks of age.

Parasite resistance to any particular class of anthelmintic may develop following frequent, repeated use of an anthelmintic of that class.

### **4.5 Special precautions for use**

#### **Special precautions for use in animals**

Any part used tablet should be discarded.

To ensure administration of a correct dose, body weight should be determined as accurately as possible.

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

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

In the interests of good hygiene, persons administering the tablets either directly to the dog, or by adding them to the dog's food, should wash their hands afterwards.

#### **Other precautions**

Echinococcosis represents a hazard for humans. As Echinococcosis is a notifiable disease to the World Organisation for Animal Health (OIE), specific guidelines on the treatment and follow-up, and on the safeguard of persons, need to be obtained from the relevant competent authority

### **4.6 Adverse reactions (frequency and seriousness)**

In very rare cases slight and transient digestive tract disorders such as vomiting and /or diarrhoea may occur. In individual cases these signs can be accompanied by nonspecific signs such as lethargy, anorexia or hyperactivity.

The frequency of adverse reactions is defined using the following convention:

- very common (more than 1 in 10 animals displaying adverse reaction(s) during the course of one treatment)
- common (more than 1 but less than 10 animals in 100 animals)
- uncommon (more than 1 but less than 10 animals in 1,000 animals)
- rare (more than 1 but less than 10 animals in 10,000 animals)
- very rare (less than 1 animal in 10,000 animals, including isolated reports).

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

Teratogenic effects attributed to high doses of febantel have been reported in sheep and rats. No studies have been performed in dogs during early pregnancy. Use of the product during pregnancy should be in accordance with a benefit risk assessment by the responsible veterinarian. It is recommended that the product is not used in dogs during the first 4 weeks of pregnancy. Do not exceed the stated dose when treating pregnant bitches.

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

Do not use simultaneously with piperazine compounds as the anthelmintic effects of pyrantel and piperazine may be antagonized.  
Concurrent use with other cholinergic compounds can lead to toxicity.

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

For oral administration only.

The recommended dose rates are: 15mg/kg bodyweight febantel, 5 mg/kg pyrantel (equivalent to 14.4 mg/kg pyrantel embonate) and 5 mg/kg praziquantel. This is equivalent to 1 Extrontel Plus tablet per 10 kg (22 lbs) bodyweight.  
The tablets can be given directly to the dog or disguised in food. No starvation is needed before or after treatment.

If there is a risk for re-infestation, the advice of a veterinarian should be sought regarding the need for and the frequency of repeat administration.

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

The combination of praziquantel, pyrantel embonate and febantel is well tolerated in dogs. In safety studies, a single dose of 5 times the recommended dose or greater gave rise to occasional vomiting.

#### **4.11 Withdrawal period(s)**

Not applicable.

### **5. PHARMACOLOGICAL PROPERTIES**

Pharmacotherapeutic group: Anthelmintic, praziquantel combinations.  
ATC vet code: QP52AA51

#### **5.1 Pharmacodynamic properties**

This product contains anthelmintics active against gastrointestinal roundworms and tapeworms. The product contains three active substances, as follows:

1. Febantel, a probenzimidazole
2. Pyrantel embonate (pamoate), a tetrahydropyrimidine derivative
3. Praziquantel, a partially hydrogenated pyrazinoisoquinoline derivative

In this fixed combination, pyrantel and febantel act against all relevant nematodes

(ascarids, hookworms, and whipworms) in dogs. In particular, the activity spectrum covers *Toxocara canis*, *Toxascaris leonina*, *Uncinaria stenocephala*, *Ancylostoma caninum* and *Trichuris vulpis*.

This combination shows synergistic activity in the case of hookworms and febantel is effective against *T. vulpis*.

The spectrum of activity of praziquantel covers all important cestode species in dogs, in particular *Taenia* spp., *Dipylidium caninum*, *Echinococcus granulosus* and *Echinococcus multilocularis*. Praziquantel acts against all adult and immature forms of these parasites.

Praziquantel is very rapidly absorbed through the parasite's surface and distributed throughout the parasite. Both in vitro and in vivo studies have shown that praziquantel causes severe damage to the parasite integument, resulting in the contraction and paralysis of the parasites. There is an almost instantaneous tetanic contraction of the parasite musculature and a rapid vacuolization of the syncytial tegument. This rapid contraction has been explained by changes in divalent cation fluxes, especially calcium.

Pyrantel acts as a cholinergic agonist. Its mode of action is to stimulate nicotinic cholinergic receptors of the parasite, induce spastic paralysis of the nematodes and thereby allow removal from the gastrointestinal system by peristalsis.

Within the mammalian system, febantel undergoes ring closure, forming fenbendazole and oxfendazole. It is these chemical entities which exert the anthelmintic effect by inhibition of tubulin polymerisation. Formation of microtubules is thereby prevented, resulting in disruption of structures vital to the normal functioning of the helminth. Glucose uptake in particular is affected, leading to a depletion in cell ATP. The parasite dies upon exhaustion of its energy reserves, which occurs 2 – 3 days later.

## 5.2 Pharmacokinetic particulars

Perorally administered praziquantel is absorbed almost completely from the intestinal tract. After absorption, the drug is distributed to all organs. Praziquantel is metabolized into inactive forms in the liver and secreted in bile. It is excreted within 24 hours to more than 95% of the administered dosage. Only traces of non-metabolised praziquantel are excreted.

Following administration of the product to dogs, peak plasma concentrations of praziquantel were achieved by approximately 2.5 hours.

The pamoate salt of pyrantel has low aqueous solubility, an attribute that reduces absorption from the gut and allows the drug to reach and be effective against parasites in the large intestine. Following absorption, pyrantel pamoate is quickly and almost completely metabolized into inactive metabolites that are excreted rapidly in the urine.

Febantel is absorbed relatively rapidly and metabolized to a number of metabolites including fenbendazole and oxfendazole, which have anthelmintic activity.

Following administration of the product to dogs, peak plasma concentrations of fenbendazole and oxfendazole were achieved by approximately 7-9 hours.

## 6. PHARMACEUTICAL PARTICULARS

## **6.1 List of excipients**

Lactose monohydrate,  
Microcrystalline cellulose,  
Magnesium stearate,  
Colloidal anhydrous silica,  
Croscarmellose sodium,  
Sodium laurilsulfate  
Pork flavour

## **6.2 Incompatibilities**

Not Applicable

## **6.3 Shelf life**

Shelf life of the veterinary medicinal product as packaged for sale: 3 years  
Discard any unused divided tablets.

## **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**

The product is presented in either:

Individual strips composed of aluminium foil 30 µm/30 gsm extruded polythene,  
containing 2, 4, 6, 8, 10, 12, 14, 16, 18 or 20 tablets.

or

Individual blisters composed of 45 µm, soft temper aluminium foil and 25 µm hard  
temper aluminium foil, containing 2 or 8 tablets.

The strips or blisters are packed into cartons containing either 2, 4, 6, 8, 10, 12, 14,  
16, 18, 20, 24, 28, 30, 32, 36, 40, 42, 44, 48, 50, 52, 56, 60, 70, 80, 84, 90, 98, 100,  
104, 106, 120, 140, 150, 180, 200, 204, 206, 250, 280, 300, 500 or 1000 tablets.

Not all pack sizes may be marketed.

## **6.6 Special precautions for the disposal of unused veterinary medicinal products or waste materials**

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

## **7. MARKETING AUTHORISATION HOLDER**

C&H Generics Ltd  
c/o Michael McEvoy and Co  
Seville House  
New Dock Street  
Galway  
Ireland

**8. MARKETING AUTHORISATION NUMBER**

Vm 40162/4001

**9. DATE OF FIRST AUTHORISATION**

05 July 2012

**10. DATE OF REVISION OF THE TEXT**

August 2018

Approved: 17 August 2018

A handwritten signature in dark ink, appearing to read 'D. Austin', with a horizontal line extending to the right.