SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Rofectan Plus XL Tablets for Dogs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each tablet contains:

Active substances:

Praziquantel	175 mg
Pyrantel Embonate	504 mg (equivalent to 175 mg pyrantel)
Febantel	525 mg

Excipients:

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Tablet

A yellow coloured oblong tablet with a breakline on both sides.

The tablets can be divided into equal halves.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs.

4.2 Indications for use, specifying the target species

In adult dogs:
For the treatment of mixed infections with roundworms, hookworms, whipworms, and tapeworms of the following species:

Roundworms (Nematodes):
Ascarids (adult and late immature forms): *Toxocara canis*, *Toxascaris leonina*.
Hookworms (adults): *Uncinaria stenocephala*, *Ancylostoma caninum*.
Whipworms (adults)**:** *Trichuris vulpis*.

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

4.3 Contraindications

Do not use in cases of hypersensitivity to the active substances or to any of the excipients
Do not use simultaneously with piperazine compounds as piperazine may block the action of pyrantel embonate contained in this product. Other worming products may contain piperazine.
Do not use simultaneously with other deworming products without veterinary advice.
Do not exceed the stated dose.

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.
Dogs should also be prevented from scavenging or hunting as part of measures to prevent tapeworm reinfestation.
If your dog receives other veterinary medicinal products, check with a veterinary surgeon or pharmacist before using this product.
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

Do not exceed the stated dose, especially when treating pregnant bitches.
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 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 mild 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 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

Consult a veterinary surgeon before treating pregnant animals.
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.
The product may be used in lactating bitches from two weeks after giving birth (see Section 4.9 below).

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 (see section 4.3).
Concurrent use with other cholinergic compounds (e.g. neostigmine, propoxur, and bethanechol) can lead to toxicity.

4.9 Amounts to be administered and administration route

For oral administration only.

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

Dosage:
1 tablet per 35 kg bodyweight.
This is equivalent to 15 mg febantel, 14.4 mg pyrantel embonate and 5 mg praziquantel per kilo bodyweight.

It is important to follow the treatment recommendations as presented here. Do not deviate from the recommendations without the advice of your veterinary surgeon.

Dosage table:

Bodyweight (kg)	Tablets
17.5kg	½
>17.5-35.0 kg	1
>35.0-52.5 kg	1 ½
>52.5-70 kg	2

Administration and Duration of Treatment

Not for use in dogs weighing less than 17.5 kg

The tablets can be given directly to the dog or disguised in food. No starvation is needed before or after treatment.

For routine worm control adult dogs should be treated with a single dose every 3 months.
For the control of Toxocara, nursing bitches should be dosed 2 weeks after giving birth and every two weeks until weaning.

In case of suspected heavy roundworm infestation, please contact your veterinary surgeon for diagnosis and treatment recommendations.

If there is a risk of re-infestation (see section 4.4), 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 Major Incompatibilities

Not Applicable

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 5 years

Shelf-life of half tablets: 14 days.

6.4 Special precautions for storage

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

Keep the blister in the outer carton in order to protect from light.

Each time an unused half tablet is stored, it should be returned to the open blister space and the blister inserted back into the outer carton.

6.5 Nature and composition of immediate packaging

The product is presented in:

Blister packs made up of PVC/PE/PCTFE with 20µ hard tempered aluminium foil with 1, 2, 4, 5, 6, or 8 tablets per blister.

The blisters are packed into cartons containing either 1, 2, 4, 5, 6, or 8 tablets.

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 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 40162/4035

9. DATE OF FIRST AUTHORISATION

12 January 2021

10. DATE OF REVISION OF THE TEXT

January 2021

Approved 03 February 2021