ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Biocan Novel DHPPi/L4R, lyophilisate and suspension for suspension for injection for dogs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each dose (1 ml) contains:

Active substances:

Lyophilisate (live attenuated):	**Minimum**	**Maximum**
Canine Distemper virus, strain CDV Bio 11/A	$10^{3.1}$ $TCID_{50}$*	$10^{5.1}$ $TCID_{50}$*
Canine Adenovirus type 2, strain CAV-2 Bio 13	$10^{3.6}$ $TCID_{50}$*	$10^{5.3}$ $TCID_{50}$*
Canine Parvovirus type 2b, strain CPV-2b Bio 12/B	$10^{4.3}$ $TCID_{50}$*	$10^{6.6}$ $TCID_{50}$*
Canine Parainfluenza type 2 virus, strain CPiV-2 Bio 15	$10^{3.1}$ $TCID_{50}$*	$10^{5.1}$ $TCID_{50}$*

Suspension (inactivated):	
Leptospira interrogans serogroup Icterohaemorrhagiae serovar Icterohaemorrhagiae, strain MSLB 1089	GMT** ≥ 1:51 ALR***
Leptospira interrogans serogroup Canicola serovar Canicola, strain MSLB 1090	GMT** ≥ 1:51 ALR***
Leptospira kirschneri serogroup Grippotyphosa serovar Grippotyphosa, strain MSLB 1091	GMT** ≥ 1:40 ALR***
Leptospira interrogans serogroup Australis serovar Bratislava, strain MSLB 1088	GMT** ≥ 1:51 ALR***
Inactivated rabies virus, strain SAD Vnukovo-32	> 2.0 IU****

Adjuvant:	
Aluminium hydroxide (quantified as Al_2O_3)	1.8-2.2 mg

* Tissue culture infectious dose – 50%
** Antibody micro agglutination-lytic reaction (serology in rabbits)
*** Geometric mean titre
**** International Units;
batch potency test performed by serological testing according to Ph. Eur. monograph 0451

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Lyophilisate and suspension for suspension for injection.

The visual appearance is as follows:

Lyophilisate:	Spongy matter, white colour.
Suspension:	Pink liquid with easily shakeable sediments.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs.

4.2 Indications for use, specifying the target species

Active immunization of dogs from 8-9 weeks of age.

- to prevent mortality and clinical signs caused by canine distemper virus
- to prevent mortality and clinical signs caused by canine adenovirus type 1
- to prevent clinical signs and reduce viral excretion caused by canine adenovirus type 2
- to prevent clinical signs, leukopenia and viral excretion caused by canine parvovirus
- to prevent clinical signs (nasal and ocular discharge) and reduce viral excretion caused by canine parainfluenza virus
- to prevent clinical signs, infection and urinary excretion caused by *L. interrogans* serogroup Australis serovar Bratislava
- to prevent clinical signs and urinary excretion and reduce infection caused by *L. interrogans* serogroup Canicola serovar Canicola and *L. interrogans* serogroup Icterohaemorrhagiae serovar Icterohaemorrhagiae

- to prevent clinical signs and reduce infection and urinary excretion caused by *L. kirschneri* serogroup Grippotyphosa serovar Grippotyphosa
- to prevent mortality, clinical signs and infection caused by rabies virus

Onset of immunity:
- 2 weeks after a single vaccination from 12 weeks of age for rabies,
- 3 weeks after the first dose of the basic vaccination for CDV, CAV, CPV,
- 3 weeks after completion of the basic vaccination for CPiV and
- 4 weeks after completion of the basic vaccination for *Leptospira* components.

Duration of immunity:
At least three years following the primary vaccination course for canine distemper virus, canine adenovirus type 1, canine adenovirus type 2, canine parvovirus and rabies. At least one year following the primary vaccination course for canine parainfluenza virus, *Leptospira* components. Duration of immunity for rabies was demonstrated after one vaccination at 12 weeks of age.
The duration of immunity against CAV-2 was not established by challenge. It was shown that 3 years after the vaccination CAV-2 antibodies are still present. Protective immune response against CAV-2 associated respiratory disease is considered to last at least 3 years.

4.3 Contraindications
Do not use in case of hypersensitivity to the adjuvant or to any of the excipients.

4.4 Special warning for each target species
Immunological responses to the CDV, CAV-2 and CPV components of the vaccine may be delayed due to maternally derived antibody interference. However, the vaccine has been proven to be protective against virulent challenge in the presence of maternally derived antibodies to CDV, CAV and CPV at levels equal or higher to those likely to be encountered under field conditions. In situations where very high maternally derived antibodies levels are expected, the vaccination protocol should be planned accordingly.
Vaccinate healthy animals only.

4.5 Special precautions for use

Special precautions for use in animals:
Do not use in animals that are showing signs of rabies or that are suspected of being infected with rabies virus.
The live virus vaccine strains CAV-2, CPiV and CPV-2b may be shed by vaccinated dogs but due to the low pathogenicity of the strains, it is not necessary to keep vaccinated dogs separated from non-vaccinated dogs.

Since the vaccine virus strain CPV-2b has not been tested in domestic cats and other carnivores (except dogs) that are known to be susceptible to canine parvoviruses, it is recommended vaccinated dogs to be separated from other canine and feline species after vaccination.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:
In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label to the physician.

4.6 Adverse reactions (frequency and seriousness)
Following subcutaneous administration in dogs a transient swelling (up to 5 cm) may commonly be observed at the injection site, these can occasionally be painful, warm or reddened. Any such swelling will either have spontaneously resolved or be greatly diminished by 14 days after vaccination. In rare cases gastrointestinal signs such as diarrhoea and vomiting or anorexia and decreased activity are possible.
As with any vaccine rare, occasional hypersensitivity reactions may occur. If such a reaction occurs, appropriate treatment should be administered without delay.

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 the veterinary medicinal product has not been established during pregnancy and lactation. Therefore, the use is not recommended during pregnancy and lactation.

4.8 Interaction with other medicinal products and other forms of interaction

No information is available on the safety and efficacy of this vaccine when used with any other veterinary medicinal product. A decision to use this vaccine before or after any other veterinary medicinal product therefore needs to be made on a case by case basis.

4.9 Amounts to be administered and administration route

Subcutaneous use.

Dose and route of administration:
Aseptically reconstitute the lyophilisate with the suspension. Shake well and administer immediately the entire content (1 ml) of the reconstituted product.

Reconstituted vaccine: pink-red or yellowish colour with slight opalescence.

Basic vaccination scheme:
Two doses of Biocan Novel DHPPi/L4R 3–4 weeks apart from 8–9 weeks of age. The second dose should not be given before 12 weeks of age.

Rabies
The efficacy of the rabies fraction is proven after a single dose from 12 weeks of age in laboratory studies. Therefore, the first dose at 8-9 week of age may be given using Biocan Novel DHPPi/L4. In this case the second vaccination with Biocan Novel DHPPi/L4R should not be given before 12 weeks.
However, in field studies 10% of seronegative dogs did not show seroconversion (> 0.1 IU/ml) 3–4 weeks after single primary vaccination against rabies. Another 17% did not show the 0.5 IU/ml rabies antibody titre required by some non-EU countries to travel in. In case of travelling to risk areas or for travel outside the EU veterinary surgeons may wish to use a two doses primary course including rabies or give an additional rabies vaccination after 12 weeks.

In case of need, dogs younger than 8 weeks can be vaccinated as safety of this product has been demonstrated in 6 weeks old dogs.
The vaccination may be indicated as soon as 6 weeks of age with compatible product Biocan Novel DHPPi.

Revaccination scheme:
A single dose of Biocan Novel DHPPi/L4R should be given every 3 years. Annual re-vaccination is required for Parainfluenza and Leptospira components therefore a single dose of compatible vaccine Biocan Novel Pi/L4 can be used annually as required.

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

No other adverse effects other than those mentioned under section 4.6 (Adverse reactions) have been observed after administration of an overdose of the vaccine. In minority of animal's pain was observed at the injection site immediately after administration of a 10x overdose of the DHPPi component. The pain lasted up to 1 minute and subsided without requiring any therapy.

4.11 Withdrawal period(s)

Not applicable.

5. IMMUNOLOGICAL PROPERTIES

Pharmacotherapeutic group:
Immunologicals for canidae, live and inactivated viral and inactivated bacterial vaccines
ATCvet code:
QI07AJ06

The vaccine is intended for the active immunisation of healthy puppies and dogs against diseases caused by canine distemper virus, canine parvovirus, canine adenovirus type 1 and 2, canine parainfluenza virus, *Leptospira interrogans* serogroup Icterohaemorrhagiae serovar Icterohaemorrhagiae, *Leptospira interrogans* serogroup Canicola serovar Canicola, *Leptospira interrogans* serogroup Australis serovar Bratislava, *Leptospira kirschneri* serogroup Grippotyphosa serovar Grippotyphosa, and rabies virus.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Lyophilisate:
Trometamol
Edetic acid
Sucrose
Dextran 70

Suspension:
Sodium chloride
Potassium chloride
Potassium dihydrogen phosphate
Disodium hydrogen phosphate dodecahydrate
Water for injection
Aluminium hydroxide

6.2 Major incompatibilities
Do not mix with any other veterinary medicinal product.

6.3 Shelf life
Shelf life of the veterinary medicinal product as packaged for sale: 2 years.
Shelf life after reconstitution according to directions: administer the vaccine immediately.

6.4 Special precautions for storage
Store and transport refrigerated (2 °C – 8 °C).
Do not freeze. Protect from light.

6.5 Nature and composition of immediate packaging
The vaccine is supplied in Type I glass vials complying with Ph. Eur. Vials of the lyophilisate are closed with a bromobutyl rubber stopper and aluminium cap. Vials of the suspension are closed with a chlorobutyl rubber stopper and aluminium cap. The vaccine is supplied in transparent plastic boxes containing 10, 25 or 50 vials with 1 dose of lyophilisate and 10, 25 or 50 vials with 1 ml (1 dose) of suspension.
The approved package insert is enclosed.
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

Bioveta, a.s.
Komenského 212/12
683 23 Ivanovice na Hané
Czech Republic

8. MARKETING AUTHORISATION NUMBER(S)
9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation:
Date of last renewal:

10. DATE OF REVISION OF THE TEXT

PROHIBITION OF SALE, SUPPLY AND/OR USE
Not applicable.