

Elanco

A Guide to Post-Weaning Diarrhoea (PWD) Management



COLIPROTEC™ F4|F18

A MORE SUSTAINABLE FUTURE

Veterinary Practice

Veterinary Surgeon

Contact Number

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Coliprotec™ vaccine will protect piglets from the most common cause of post-weaning diarrhoea caused by enterotoxigenic *E. coli* (ETEC) F4/F18^{1,2}.

The improvement in the gut health of young pigs can significantly improve performance^{3,4,5} and reduce the need for antimicrobial interventions⁶.

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Achieve maximum vaccine efficacy through good vaccination practice with attention to storage, preparation & administration.

What are the Symptoms of PWD?

- Decreased feed intake
- Dehydration
- Sunken eyes
- Lethargy
- Fever



On farm
diagnostic
test kits are
available from
Elanco

Faecal Scores

TOP TIP:
Monitor faecal
score improvements,
4 being bad and
1 being good

Faecal scoring is an effective way to monitor PWD in piglets. The scores reflect the severity of the disease.



1

Pasty faeces



2

Mild diarrhoea

Faecal consistency has more solid components than fluids



3

Moderate diarrhoea

Faecal consistency has more fluids than solid components



4

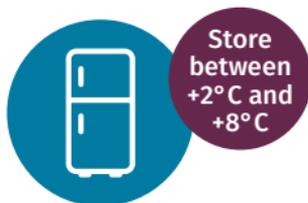
Severe diarrhoea

Fluid faecal consistency

Storage

Storage protocol⁷

1. Optimal fridge temperature is between +2°C and +8°C.
2. Do not store live vaccines at temperatures lower than +2°C or exceeding +8°C.
3. Do not allow vaccines to have contact with the back of the fridge.
4. Never store vaccines in the fridge door.
5. Use a fridge without a freezing compartment.
6. Always use a minimum-maximum thermometer.
7. Check the temperature at different levels within the fridge.
8. Renew your fridge regularly.
9. Always store your vaccines according to the FIFO-principle (first in, first out). Use the vaccines with the nearest expiry date.



Preparation

What you need for vaccination

It is important to have the correct equipment prior to preparing and administering the vaccine.

You will need:



Distilled water that is clear of chlorine or disinfectants - a water stabiliser should be used.



A new sterile syringe.



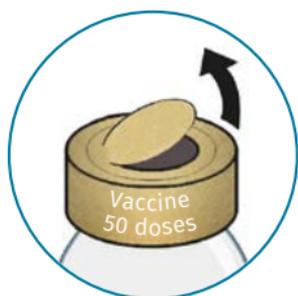
A water bottle for the reconstitution process.



Disposable gloves for hygiene purposes.

Preparation

Reconstitution of the oral vaccine



Remove the aluminium lid



Take 10 ml of mineral water



50 ready-to-use doses.
Use within 4 hours



Add mineral water to the 100 ml mark

For 100 pigs
use two 50-dose
vials and fill the
bottle to the
200 ml mark



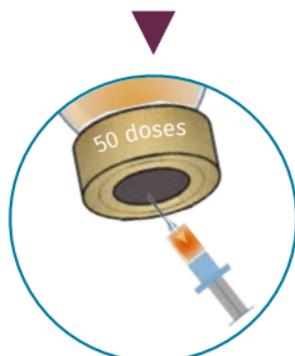
Inject 10 ml
of mineral water



All of the lyophilisate
must be dissolved



Empty the syringe



Collect the entire solution

Vaccine Administration

Pre-weaning vaccine administration in water bowls

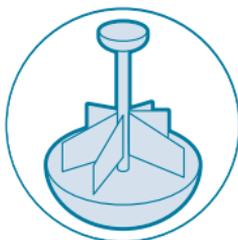


In a 10 L bucket:

- Add 5 g or 1 teaspoon of AviBlue™
- Add 10 L of water



Add the number of doses corresponding to the number of piglets in the litter (add 2 ml vaccine per piglet)



Transfer 1 L solution with the vaccine into the water bowl (Make sure it is clean and free from food)

Post-weaning vaccine administration in water bowls

Follow the mixing process as described, but increase the volume of vaccine solution in the water bowls as set out below.

Piglets / pen	Water / pen (Litres)	
	Weaning 21 days	Weaning 28 days
15	2.55	3.5
20	3.5	4.6
25	4.75	5.75
30	5	7

**1 bucket
of 10 L treats
60 piglets at
21 days of age**

**1 bucket
of 10 L treats
40 piglets at
28 days of age**

Alternatively drench individuals

Introduce 2 ml per piglet directly to the back of the throat using a drenching gun.

Vaccine Administration contd.

Post-weaning vaccination in water bowls (From 18 days of age)

Using Electrolytes

STEP 1: Reconstitute lyophilisate 50 doses

- Add 10 ml of sterile water to the vial
- Shake thoroughly
- Transfer the suspension into a measuring cup
- Rinse the vial 3x with sterile water



TOP TIP:
Don't worry if some piglets fail to drink the solution

STEP 2: Dilute according to required volumes:

- Prepare an electrolyte solution as follows:
 - Younger piglets: **60-80 ml** per piglet
 - Older piglets: **100-150 ml** per piglet
- Add AviBlue™ (0,5 g/L) or another water stabilizer to the electrolyte solution⁷
- Add re-suspended vaccine to electrolyte solution
- Stir thoroughly

STEP 3: Administration in water bowls

- Use immediately
- Ensure the piglets drink within 4 hours
- Administer the volume of solution calculated in step 2: younger piglets 60-80 ml, older piglets 100-150 ml⁷
- Age: from 18 days (suckling piglets - see datasheet)
- Administration is recommended **at least 7 days** before expected onset of diarrhoea⁷



Vaccine Administration contd.

Pre-weaning vaccination in water bowls (From 18 days of age) **Using Milk**



STEP 1: Reconstitute vial as follows:

- Add 10 ml of untreated mineral water to the vial
- Shake thoroughly
- Transfer the suspension into a measuring cup
- Rinse the vial 3x with tap water



STEP 2: Dilute according to required volumes:

- Prepare milk according to label (**attention: keep milk solution <math><35^{\circ}\text{C}</math> due to live vaccine**), determine the total volume of milk the pigs will drink **in 4 hours** before vaccination (an estimated intake is 110-230 ml per piglet)⁷
- Add re-suspended vaccine to electrolyte solution
- Stir thoroughly

TOP TIP:
Administer the
Coliprotec™ vaccine
before normal onset
of diarrhoea

STEP 3: Administration in water bowls

- Use immediately
- Ensure the piglets drink it within 4 hours
- Administer dose in one single feed or across two feeds.
Two doses: first 1 L volume and then the rest of the solution after a 30-minute delay
- Dosing: 110-230 ml per piglet (dependent on age and uptake)⁷
- Age: from 18 days (suckling piglets - see datasheet)
- Administration **at least 7 days** before the onset of diarrhoea symptoms⁷

AviBlue™

A good water stabiliser is key to protecting the vaccine whilst in drinking water.

- Protects 'In Water' vaccines from harmful chemicals of administration.
- Buffers the effects of contaminants found in tap/bore-hole water.



Managing Expectations

What to expect after using the Coliprotec vaccine:

- In some cases, for short periods the faecal score may increase post vaccination. This will not last
- There will be reduced excretion of pathogenic *E. Coli* - leading to lower environmental challenge
- Re-evaluate after 8 weeks



Benefits of Successful Vaccination with Coliprotec

Protects against the main causes of *E. coli* related PWD.^{1,12}

Results in early protection.

Immunity is achieved by 7 days from a single oral vaccination.

Reduction in mortalities with a significant 3.1% improvement.^{15,17}

Improved average daily weight gain.³

Coliprotec vaccinated pigs can be 1 kg, or more, heavier than unvaccinated pigs at the end of the nursery period¹⁶. This early gain in performance can result in an extra 2 kg of body weight at slaughter.⁵

Gets pigs to market faster.

Vaccinated animals reach market weight up to 7 days earlier.⁶

Reduces cross infection between pigs.

Vaccination decreases faecal shedding of harmful enterotoxigenic *Escherichia coli* (ETEC) which reduces the risk of cross infection.

Using the Coliprotec Vaccine will reduce the environmental impact of alternatives, such as Zinc Oxide.

Evaluation



Evaluation check list after 8 weeks



Decreased proportion of pigs with severe faecal scores (consistently drier litter: scores 3-4).



Less use of antibiotics.



Improved feed intake.



Improved average daily weight gain.



Increased pigs to market.



Reduced mortalities from PWD.



COLIPROTEC™ F4/F18

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* F4/F18

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Coliprotec F4/F18 is an oral vaccine used for active immunization of pigs from 18 days of age against enterotoxigenic F4-positive and F18-positive *Escherichia coli* in order to reduce the incidence of moderate to severe post-weaning diarrhoea infected pigs and reduce the faecal shedding of enterotoxigenic F4-positive and F18-positive *E. coli* from infected pigs. Each dose of vaccine contains 1.3×10^8 to 9.0×10^8 CFU of live non-pathogenic *Escherichia coli* O8:K87 (F4ac) and 2.8×10^8 to 3.0×10^9 CFU of live non-pathogenic *Escherichia coli* O141:K94 (F18ac). Refer to the product packaging and leaflets for information about side effects, precautions, warnings and contraindications. Legal category POM-V Advice should be sought from the Medicine Prescriber. For further information consult the product SPC.

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