



# Applied in the Hatchery

## Eimeriavax Coccidiosis vaccines

Recommendation for vaccine preparation when  
**spray on birds is applied in the hatchery**

### Step 1: Preparation of the spraying device

Use a clean spraying vaccine device which provides a droplet size of  $\geq 100 \mu\text{m}$ . In spraying devices containing a filter it is advised to remove the filter during vaccination. Determine the flow rate of the spraying device per chicken box. This can be done by adding clean drinking water in the spray cabinet, preferably use the colour agent\* in the water to check the surface sprayed by the device. Make sure the lines of the spraying machine are completely filled before checking the volume sprayed by the machine. Collect the water in **a recipient** to measure the amount of water sprayed by the device (range is normally around 24 ml/box of 100 chickens). **Make sure the spray is covering the complete area of the chicken boxes before the start of the vaccination.** This can easily be checked by spraying water with colour agent in an empty chicken box, containing paper on the ground of the box.

### Step 2: Calculation of the volumes needed for vaccination

As standard recommendation it is advised to prepare **for each 1000 doses** a volume of **240 ml coarse spray solution**. Add colourant agent\*. In case the spraying device is spraying higher or slighter lower amounts than 24 ml/box of 100 chickens per cycle, adapt the recommendations according to the volume sprayed.

Number of birds to vaccinate	Vaccine**	Volume of clean drinking water
1,000 birds	1,000 doses	240 ml
5,000 birds	5,000 doses	1.2 litres
10,000 birds	10,000 doses	2.4 litres
20,000 birds	20,000 doses	4.8 litres
30,000 birds	30,000 doses	7.2 litres
40,000 birds	40,000 doses	9.6 litres

\*\* Vaccine is available in vials (25ml fill volume) containing 1000 or 5000 doses.

### Step 3: Preparation of the vaccine solution

Shake the vaccine vial thoroughly to re-suspend the oocysts. Open the vial and pour the entire contents into the clean drinking water. Rinse the vaccine vial at least 2-3 times with water to ensure that all oocysts are removed from the vial. Add the colour agent to the vaccine solution and mix thoroughly. Fill the vaccine reservoir of the spraying device with the prepared vaccine volume. Droplet size for coarse spray should be at least  $100 \mu\text{m}$ .

### Step 4: Spraying the vaccine solution on the birds

Make sure the water used for the calibration is completely replaced by the vaccine suspension. Check if the spraying device **sprays the vaccine solution homogeneously over the birds**. Aim to continuously maintain homogeneity of the vaccine suspension. Make sure there is enough light after vaccination so that the birds are motivated to preen and ingest the vaccine.

Maintain the chicks inside the chick box for at least one hour in order to let them ingest all the vaccine droplets.

\* For example CEVAMUNE® (CEVA) or VAC-SAFE™ (MSD) blue colourants or any other food dye (such as Brilliant Blue).

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## Key points for a successful coccidiosis vaccination

The vaccine contains **live coccidian oocysts** and is dependent upon replication of the vaccinal lines within the chickens for building up of immunity.

To reduce the chance of coccidial challenge before the onset of immunity, litter should be removed and chicken housing should be **thoroughly cleaned** between rearing cycles. Make sure all rests of feed were removed from the previous cycle and that the feed lines were cleaned with a non-medicated feed if necessary. All drinker and drinker lines should be cleaned properly to avoid persistence from rest medication in the drinking water.

**Recycling of oocysts** is necessary for the development of immunity and for continued protection. Contact between the excreted vaccine and the birds after vaccination is guaranteed when birds are floor reared and housed at normal commercial density (the higher the density, the higher the possibility for recycling). In case of rearing on slatted floors care should be taken that recycling is guaranteed for minimum 3 weeks after vaccine application.

To guarantee an **optimal sporulation** of the excreted vaccine a minimum relative humidity of 60% in the poultry house, a dry matter content in the litter of maximum 80% and a litter temperature of minimum 25°C is advisable.

Do **not use products** with **anti-coccidial activity** at any time following vaccination since they will affect the live vaccine and will adversely affect the development of immunity.



Eimeria Pty Ltd



Bioproperties Pty Ltd  
36 Charter Street  
Ringwood VIC 3134  
Australia

Ph: +61 3 9871 2000  
bioinfo@bioproperties.com.au  
www.bioproperties.com.au



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