MONITORING VACCINATION FOR A HOMOGENOUS DISTRIBUTION

- The deep blue color given to the vaccine water by AviBlue allows for an exact visualization of water flow in the drinking line (left, top). This enables the vaccination crews to detect the moment when the vaccine-mixed water reaches the end of the drinking lines, therefore ensuring precise control and homogenous vaccine distribution throughout the flock.
- In addition, vaccination time can also be monitored as the stained water continues to flow through the drinkers.
- The homogenous distribution of a live vaccine in drinking water dissolved with AviBlue can also be verified directly on the birds. Observation of stained tongues (left, bottom) will indicate that the birds have consumed the vaccine-mixed water. Depending on the concentration of AviBlue utilized, stained crops (left, center) can also be observed and utilized as a monitor parameter for uniformity of vaccine consumption.

Safe ingredients

All ingredients of AviBlue are of food grade. Both the coloring and the water protection agents are used also for human consumption and safe for birds.

AviBlue directions for use

Dissolve AviBlue into drinking water in a concentration of 125 g per 1000 liters (264 gallons) (one measuring cap for every 200 liters (53 gallons)).

For medicating pumps, calculate the total amount of water to be consumed in two hours and dissolve the equivalent concentration into the stock solution, also to be finished in two hours (please see more information on leaflet Practical Vaccination Points – AviPro® SALMONELLA VAC E and AviPro® SALMONELLA VAC T).

For intense coloring effects, concentration can be increased up to 125 g/100 liters (26 gallons) of water.

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For further information please contact (Germany address on page 1):

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LOHMANN ANIMAL HEALTH

AviBlue

VISIBLE PROTECTION

- Water stabilizer
- Safe ingredients – food grade
- Efficacious vaccination even under sub-optimal water conditions
- Visualizes water flow in the drinking line
- Easy to add – with attached measuring cap
- Effervescent granules – fast dissolution into drinking water
- Better utilization of titers per dose throughout vaccination

AviBlue – Water stabilizer with dye for the use in stock solutions and drinking water. **Use:** Dissolve AviBlue into drinking water in a concentration of 125 grams per 1000 liters (264 gallons). For intense coloring effects the concentration can be increased to 125 grams per 100 liters (26 gallons). **Caution:** Store in a cool dry place. Not intended for spray, aerosol, eye-drop or injectable application. **Safety precautions:** Keep out of the reach of children. Do not use for human consumption. Net Content 375 grams

For further information please contact (U.S.A. address on page 4):
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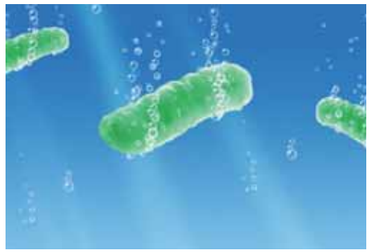
LOHMANN ANIMAL HEALTH

LOHMANN ANIMAL HEALTH

AviBlue WATER STABILIZER WITH DYE FOR THE USE IN STOCK SOLUTIONS AND DRINKING WATER

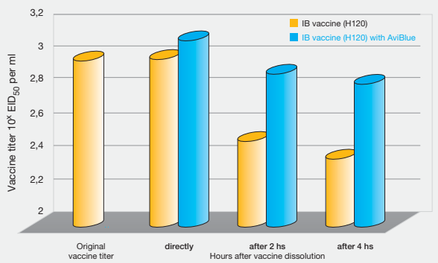
With vaccination procedures becoming so important for successful protection of highly specialized and often costly birds, water quality, water distribution and flock behavior must be therefore well controlled.

AviBlue is an effervescent granulate with an improved solubility formula, reducing negative effects of tap water and visualizing the flow of water in the drinking line.

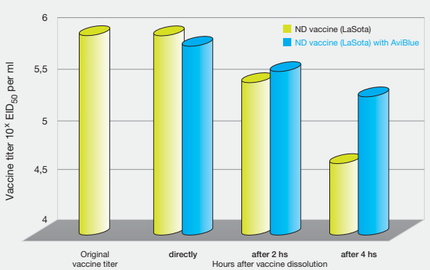


Better utilization of titers per dose throughout vaccination

Stabilizing effect of AviBlue in water
Maintenance of titer of an IBV live vaccine



Stabilizing effect of AviBlue in water
Maintenance of titer of an ND live vaccine



In drinking water vaccination for poultry farms, it is not only important that the vaccination crews handle the vaccine according to the recommendations of the producer. They should also ensure that the vaccine survives the hours after re-suspension in the drinking water or in the stock solution (in the case of pump medicators).

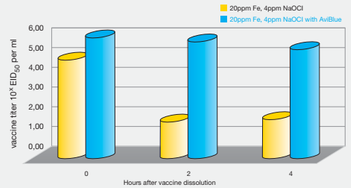
The reason is that as live vaccines are re-suspended into tap water, the antigen count (titer) may inevitably reduce as it spends time dissolved in the water. This is due to the natural survival rate of the microorganism in a water suspension. Such reduction can be accelerated when under sub-optimal water conditions.

Vaccines are released with sufficient high titers to guarantee minimum levels of antigen count at the end of the recommended period for water intake after re-suspension. It is the responsibility of vaccine suppliers and vaccination crews to minimize the loss of titer/antigen during the administration of the vaccine. As Avian Professionals, LAH technicians have recommended the addition of skimmed milk or low-fat milk powder to stabilize the water. With AviBlue, water stabilization becomes easier to guarantee and more practical on the farm routine. In addition, the attached measuring cap of AviBlue allows for a more easy and exact administration of the stabilizer to the water.

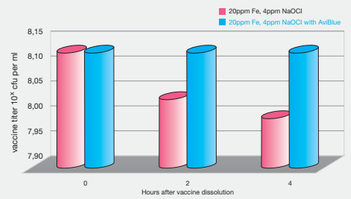
The stabilizing effect of AviBlue can be observed in these graphs. They show results of laboratory trials on differences in titer reduction after re-suspension of two live vaccines into tap water, with and without AviBlue.

EFFICACIOUS VACCINATION UNDER SUB-OPTIMAL WATER CONDITIONS

Neutralizing effect of AviBlue on sub-optimal water
Dissolution of a sensitive live vaccine - IBV



Neutralizing effect of AviBlue on sub-optimal water
Dissolution of a Salmonella Typhimurium live vaccine



AviBlue contains a combination of neutralizing agents that buffer the negative effects of hard water and water containing residues of chlorination. If not addressed, these conditions could reduce the feasibility and survival of live vaccines after re-suspension.

Poultry farms frequently utilize chlorine in their drinking water. On the one hand, they want to maintain a low level of bacterial count and on the other hand, at higher concentrations, they clean the water lines in-between flocks. A laboratory trial was done to simulate and calculate the buffering effects of AviBlue on hard water and water with chlorine residues.

The graphs at the left demonstrate results of titer counts from a sensitive live vaccine (Infectious Bronchitis) and a bacterial vaccine (Salmonella Typhimurium) after being re-suspended in a simulation of sub-optimal water: tap water spiked with active chlorine (4 ppm of NaOCl, “bleach” routinely used by poultry farms for sanitization of drinking water lines) and with iron (20 ppm of Fe, simulation of rusty/hard water).

Reduction of titers was dramatically minimized with AviBlue at the recommended concentration (125 mg/liter).

Fast dissolution

- Effervescent granules – fast dissolution into drinking water, does not require the lengthy waiting time of tablets.
- Immediate onset of protection: Vaccine can be added as soon as granules have dissolved.
- Dissolves better than other granulated products (Figure 1).

FIGURE 1: Comparison - water dissolution of AviBlue simultaneously with a product for a similar purpose, from a competitor (1.0 grams each)*.

1 second **20 seconds** **45 seconds**

* .avi file available at LAH