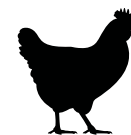


# MEFLUVAC™

## H5 + H9

## TRANSBOUNDARY CONTROL



Inactivated tetravalent vaccine against HPAI subtypes H5N1 (2.2.1.1 and 2.2.1.2), and H5N8 (2.3.4.4b) and LPAI subtype H9N2

### INTRODUCTION

Highly pathogenic avian influenza (HPAI) is an extremely contagious, multi-organ systemic disease of poultry leading to high mortality in poultry<sup>1</sup>. The disease is caused by some H5 and H7 subtypes of type A influenza virus, family *Orthomyxoviridae*.<sup>1</sup> These HPAI viruses can develop from certain LPAI viruses, usually while they are circulating in poultry flocks.<sup>2</sup>

HPAI viruses can kill up to 90-100% of the flock, and cause epidemics that may spread rapidly, devastate the poultry industry and result in severe trade restrictions.<sup>2</sup>

Avian influenza virus can spread in the farm by both the fecal-oral route and aerosols, due to the proximity of the birds, fomites can be important in transmission and flies may act as mechanical vectors.<sup>2</sup>

Highly Pathogenic Avian Influenza has been found in the yolk and albumen of eggs from chickens, turkeys and quail infected with HPAI viruses.<sup>2</sup>

Vaccination became the primary control measure used to minimize losses.<sup>3</sup>

### COMPOSITION (before inactivation)

- Inactivated reassortant Avian Influenza H5N1 subtype clade 2.2.1.1 [rgA/CK/Egypt/ME1010/2016]  $\geq 8.5 \log_{10} \text{EID}_{50}/\text{dose}$ .
- Inactivated reassortant Avian Influenza H5N1 subtype clade 2.2.1.2 [A/Chicken/Egypt/RG-173 CAL/2017]  $\geq 8.5 \log_{10} \text{EID}_{50}/\text{dose}$ .
- Inactivated Low Pathogenic Avian Influenza H9N2 subtype, G1-lineage, [A/Chicken/Egypt/ME543V/2016]  $\geq 8.5 \log_{10} \text{EID}_{50}/\text{dose}$ .

### TARGET SPECIES

Chickens.

### INDICATIONS

For immunization against Highly Pathogenic Avian Influenza H5 subtypes and Low Pathogenic Avian Influenza H9N2 subtype.

### VACCINATION PROGRAM

Birds can be vaccinated from seven days of age onwards, as per advice from your poultry veterinarian.

### IMMUNITY

- Onset of immunity: 3 weeks after the first vaccination.
- Duration of immunity: 6 weeks after the last vaccination.

### DOSAGE

The vaccine dose is 0.5 mL per bird.

### ADMINISTRATION

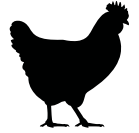
Before use, the vaccine should be shaken well to ensure proper mixing. Sterile injection equipment should be used to avoid contamination. Do not use MEFLUVAC™ H5+H9 if you notice critical irreversible separation of the emulsion.

- Subcutaneous injection: in the lower part of the neck. The needle should be inserted just under the skin in a direction away from the head and in a straight line with the neck.
- Intramuscular injection: in the breast muscles by inserting the needle with a 45° angle to avoid intraperitoneal injection.

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### STORAGE PRECAUTIONS

- Store and transport refrigerated (+2°C to +8°C).
- Do not freeze.
- Store in a dry place protected from direct sunlight.
- Do not use this product after the expiry date.
- Shelf life after first opening the bottle: 3 hours.

### References

1. Swayne DE, Suarez DL. Highly pathogenic avian influenza. *Rev Sci Tech*. 2000 Aug;19(2):463-82. doi: 10.20506/rst.19.2.1230. PMID: 10935274.
2. The Center for Food Security and Public Health, November 2015, Avian Influenza Fowl Plague, Grippe Aviaire.
3. A. Anis, M. AboElkhair, M. Ibrahim, Characterization of highly pathogenic avian influenza H5N8 virus from Egyptian domestic waterfowl in 2017, *Avian Pathol.* (2018), <https://doi.org/10.1080/03079457.2018.1470606>.

### PRESENTATION

MEFLUVAC™ H5 + H9 is packed and presented in 500 mL (1000 doses) polyethylene terephthalate (PET) bottles.

For further information please contact us:

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or visit:

[kemin.com/eu/en/markets/vaccines](http://kemin.com/eu/en/markets/vaccines)



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