

# MEVAC™

## AQUA STREPT+

IMMUNO  
COMPETENCE



Inactivated tetravalent bacterial vaccine against Streptococcosis, Lactococcosis and Enterococcosis Disease

### INTRODUCTION

Effective vaccination in fish farms can be compromised by several factors, including failure of vaccination procedure, narrow spectrum of cross protection, and high mortalities associated with stress during fish handling; therefore it is critical for the vaccination crew to comply with good vaccination practices.<sup>1</sup>

Streptococcosis, Lactococcosis and Enterococcosis are the most frequent diseases affecting Tilapia production in many geographies worldwide. These infections are respectively caused by *S. agalactiae*, *S. iniae*, *L. garvieae*, and *E. faecalis*, particularly in regions with high temperatures.<sup>1</sup>

These pathogens can affect fish at all culturing stages and are commonly associated with non-specific lesions, including hemorrhages, exophthalmia, ocular congestion, melanosis, nervous swimming behavior and rapid mortality, leading to high economic losses in marketable fish size that can potentially lead to farm closure.<sup>1</sup>

In general, vaccination of broodstock can confer good protection against early infection in the offspring. Tilapia offspring (approximately 0.5 g or less) relies on maternal derived antibodies, while larger fish (e.g. grow-out stage) relies on the active immunity conferred by commercially available vaccines.<sup>1</sup>

### COMPOSITION (before inactivation)

- Inactivated *Streptococcus agalactiae* strain 1/2016  $\geq 8.5 \log_{10} \text{EID}_{50} / \text{dose}$ .
- Inactivated *Streptococcus iniae* strain 1/2016  $\geq 8.5 \log_{10} \text{EID}_{50} / \text{dose}$ .
- Inactivated *Lactococcus garvieae* strain 1/2016  $\geq 8.5 \log_{10} \text{EID}_{50} / \text{dose}$ .
- Inactivated *Enterococcus faecalis* strain 1/2016  $\geq 8.5 \log_{10} \text{EID}_{50} / \text{dose}$ .

### TARGET SPECIES

Aquaculture.

### INDICATIONS

For vaccination and protection of commercial fish systems against against Streptococcosis, Lactococcosis and Enterococcosis disease.

### VACCINATION PROGRAM

Fish can be vaccinated from 21 days of age onwards, as per advice from your aqua veterinarian.

### WITHDRAWAL

Zero days.

### CONSIDERATIONS

- Only vaccinate healthy fish.
- Food should be withheld before vaccination.

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## PRESENTATION

MEVAC™ AQUA STREPT+ is packed and presented in 500 mL (2,500 doses) polyethylene terephthalate (PET) bottles.

## ADMINISTRATION

Before use, the vaccine should be shaken well to ensure proper mixing. Sterile injection equipment should be used to avoid contamination.

- Immersion vaccination: vaccine uptake occurs through the gills therefore the fish needs to be fully immersed in a diluted solution containing the vaccine for 2-5 minutes after which they are returned to the holding tanks. The vaccine solution should be clean, well oxygenated, at a temperature of 25 °C, following the correct dilution rate: 1 liter of undiluted vaccine to vaccinate 100 kg. weight of fish.
- Parenteral injection: the injectable dose (0.2 mL/fish) should only be applied in fish over 15 g weight. Prior vaccination the fish should be anaesthetized, and the vaccine volume should be carefully injected either in the peritoneal cavity or in the dorsal muscle.

## 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. Abu-Elala et al (2019). Efficacy of Injectable and Immersion Polyvalent Vaccine against Streptococcal Infections in Broodstock and Offspring of Nile tilapia (*Oreochromis niloticus*). *Fish & Shellfish Immunology*, Volume 88, May 2019, Pages 293-300.

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