



**Decreased Severity of Acute Hepatopancreatic Necrosis Disease in White Shrimp (*Litopenaeus vannamei*) by Mixed Culture of *Bacillus subtilis*, *Bacillus licheniformis* and *Bacillus megaterium***

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**Highlights**

- A diet supplemented with the mixed culture of *Bacillus subtilis*, *B. licheniformis*, and *B. megaterium* could decrease AHPND severity in white shrimp (*L. vannamei*).
- Infected shrimp fed with a diet supplemented with the mixed culture of *Bacillus* strain revealed higher survival percentage, lower percent of *Vibrio* AHPND strain detected by PCR, and a small amount of *Vibrio* sp. viability count in hepatopancreas than those other groups of infected shrimps.
- The mixed culture of these *Bacillus* strains can control the dissemination of the *Vibrio* AHPND strain to the hepatopancreas as a target tissue of AHPND.

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