

PENGARUH NANOPARTIKEL ALGINAT DARI *Sargassum polycystum* TERHADAP PERTUMBUHAN, RESPON IMUN NONSPEKIFIK DAN HISTOLOGI USUS UDANG VANAME (*Litopenaeus vannamei*, Boone 1931)

Tesis

Untuk memenuhi Sebagian persyaratan mencapai derajat master

Program Studi Ilmu Perikanan



disusun oleh

Erlangga Adialam

24/535952/PPN/05242

PROGRAM PASCASARJANA
FAKULTAS PERTANIAN
UNIVERSITAS GADJAH MADA
YOGYAKARTA
2026

**THE EFFECT OF ALGINATE-NANO PARTICLES FROM
Sargassum polycystum ON GROWTH, NON-SPECIFIC IMMUNE
RESPONSE, AND INTESTINAL HISTOLOGY OF PACIFIC WHITE
SHRIMP (*Litopenaeus vannamei*, Boone 1931)**

Thesis

Submitted to

Study Program of Master in Fisheries Science



Submitted by

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POSTGRADUATE PROGRAM
FACULTY OF AGRICULTURE
UNIVERSITAS GADJAH MADA
YOGYAKARTA
2026

Tesis

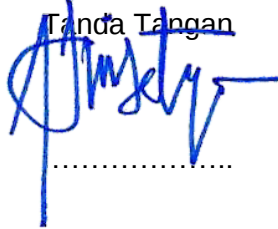
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Telah dipertahankan di depan Dewan Penguji
pada tanggal 5 Februari 2026

Pembimbing Utama

Tanda Tangan



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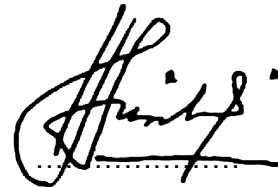
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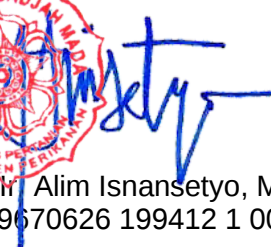


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Tesis ini diterima sebagai salah satu persyaratan
Untuk memperoleh derajat master
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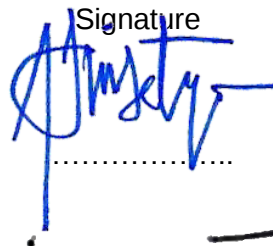
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Main Advisor

Signature

Date

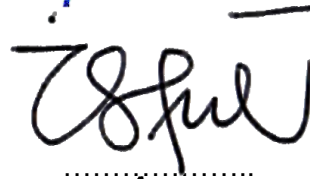
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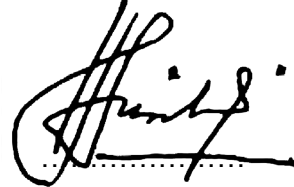
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This thesis was declared acceptable in partial fulfillment of the requirements for the master degree in Fisheries Science
Date 13 March 2026

Approved by,
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