

Aulia Nyndita Wardani

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Professional Summary

Biology graduate from Universitas Negeri Yogyakarta with hands-on experience in microbiology laboratory analysis and food safety screening. Skilled in microbial isolation and characterization, extracellular enzyme screening, and analytical data management. Experienced in governmental settings with DPKP DIY for food contaminant testing and academic research on microbial-based biodegradation. Detail-oriented team player with a genuine passion for biotechnology innovation and quality control within the laboratory environment.

Education

Universitas Negeri Yogyakarta – Indonesia **2021 – 2025**

Bachelor of Science in Biology – GPA: 3.72 / 4.00

- **Relevant coursework:** Microbiology, Biotechnology, Biochemistry, Ecology, Marine Biology, Ecology, Environmental Science.

Yala Rajabhat University – Thailand **2023 – 2024**

Bachelor of Science in Biology (Exchange Program) – GPA: 3.37 / 4.00

- **Relevant coursework:** Medical Microbiology, Biobusiness and Entrepreneurship, Science, Creative Thinking & Innovation.

Work & Internship Experience

Food Safety Intern – Dinas Pertanian dan Keamanan Pangan D.I. Yogyakarta **July – September 2024**

- Conducted regular laboratory screenings for chemical contaminants, specifically evaluating pesticide residues and formalin presence in agricultural (vegetables) and livestock (meat) commodities sourced from various traditional markets across DIY.
- Managed and processed regional food safety metrics utilizing Microsoft Excel to calculate, analyze, and present statistical contamination percentages for official departmental reporting and presentation.
- Executed agricultural field extensions and monitoring programs at specialized agricultural sites, including organic golden melon and organic grape plantations, to assess crop development, growth rates, and post-harvest quality compliance.
- Drafted official governmental activity reports and technical documentation, ensuring administrative traceability and compliance with regional food safety standards.

Research Experience

Undergraduate Thesis Researcher **February – August 2025**

Department of Biology – Universitas Negeri Yogyakarta

- Investigated the marine biodegradation capacity of local plastsphere fungi (*Penicillium* and *Trichoderma*) against thermoset Polyurethane (PU) foam.
- Screened extracellular enzymes involved in polymer breakdown, profiling laccase (ABTS oxidation), protease (skim milk agar), and lipase (Rhodamine B/olive oil fluorescence assays).
- Optimized degradation parameters by evaluating carbon co-metabolism (1% glucose) and dynamic mechanical agitation (static, 120 rpm, and 150 rpm) over a 60-day incubation window.
- Evaluated degradation efficiency via gravimetric weight loss and surface morphology analysis using Scanning Electron Microscopy (SEM) to detect micro-cracks and biofilm proliferation.

- Analyzed PU physical weight loss data using SPSS to evaluate the statistical significance of glucose addition and agitation speed optimization.

Research Team Assistant

July 2024 – January 2025

Microbiology Laboratory, Universitas Negeri Yogyakarta

- Collaborated in a faculty-led umbrella research project titled *"Potency of Face Mask Degrading Bacteria/Fungi Isolated from Parangtritis Beach, Yogyakarta, Indonesia"*.
- Managed behind-the-scenes laboratory workflows, focusing on the precise isolation and purification of marine-derived fungal strains from coastal environments.
- Constructed experimental setups by preparing standardized synthetic face mask substrate matrices and executing controlled microbial inoculations to monitor material structural wear.

Organizational Experience

Ministry of Women's Empowerment Staff - BEM KM UNY

February 2023 – February 2025

- Advocated for student safety by implementing campus awareness programs to prevent harassment.
- Appointed as Project Chairperson for the campus collaboration forum with Female Daily Network.
- Managed project operations, timelines, and logistical workflows for joint seminars and external events, including coordinating student crews for BEM KM UNY X Female Beauty.

Fertilizer Procurement Staff - PPK Ormawa | BEM KM UNY

March – November 2023

- Formulated bio-fertilizers in collaboration with local farmers in Bugel Village, using targeted microbial inoculations (Trichoderma and EM4 strains) for organic waste bioconversion.
- Monitored fermentation parameters under semi-anaerobic conditions, tracking pH, temperature, and moisture levels to maintain optimal microbial metabolic activity.
- Executed biological quality control by verifying Actinomycetes colony proliferation and reducing the carbon-to-nitrogen (C/N) ratio from >40 to an optimized <20.

Certifications & Training

- **Good Manufacturing Practices (GMP) / Cara Produksi Pangan Olahan Yang Baik (CPPOB)** – Badan Standardisasi Nasional (BSN) | Predicate: Sangat Baik (July 2026)
- **MINDO Intensive Bootcamp: Research & Development in Food Industry (Basic Level)** – Mindo Education | ISO 9001, 14001, 45001, 22000, PRP, CAPA, HACCP, Label Compliance (2026)

Skills

- **Laboratory Analysis:** Microbial Isolation & Purification, Gravimetric Weight Loss Analysis, Food Contaminant Testing (Pesticides & Formalin Screening), Biosafety & Aseptic Techniques, Rotary Shaker Incubator Operation, UV-Vis Spectrophotometry, SEM Sample Preparation & Interpretation, Fungal & Bacterial Characterization (LPCB Staining), Qualitative Enzyme Assays (Lipolytic, Proteolytic, Ligninolytic/ABTS Screening), Gravimetric Analysis, Moisture & Dry Weight Analysis, Physicochemical Parameter Monitoring, Solution & Buffer Preparation, Titration, Autoclave Sterilization, Analytical Balance.
- **Software & Tools:** SPSS, Microsoft Office (Excel, Word, PowerPoint), Mendeley Citation Manager, Canva, Capcut.
- **Languages:** Indonesian (Native) | English (Fluent) Pearson Test of English Academic: Score 55, EF Standard English Test: C1 Advanced.