

ZITA SYAKIRAH

Bandung, West Java | 082319288679 | zitasyakirah@gmail.com | [Linkedin.com/in/zitasyakirah](https://www.linkedin.com/in/zitasyakirah)

Microbiology graduate (GPA 3.76) with hands-on experience in pharmaceutical laboratory analysis, analytical testing, and process development through pharmaceutical R&D and microbiological laboratory projects. Experienced in UV-Vis, SDS-PAGE, densitometry, BCA/Bradford assays, pH, microbiological testing, and analytical data interpretation, with exposure to GMP/CPOB and GLP principles. Experienced in experimental optimization, laboratory documentation, and data-driven evaluation to support product and process development. Strong attention to detail with a structured approach to laboratory analysis and problem-solving.

EDUCATION

Institut Teknologi Bandung | *Bachelor of Science in Microbiology*

GPA 3.76/4.00 | 2022 – 2026

PROFESSIONAL EXPERIENCE

PT Bio Farma (Persero)

Jun 2025 – Aug 2025

Life Sciences Product Development Intern

- Optimized downstream bioprocessing workflows for equine plasma-derived antivenom, achieving a 47% yield increase in product fragments by refining enzymatic digestion protocols under strict CPOB/GMP regulations.
- Increased protein precipitation efficiency by 62% via optimized ammonium sulfate salting-in methodologies, significantly accelerating downstream purification and reducing product loss.
- Executed rigorous analytical QC across 11 optimization batches utilizing UV-Vis, SDS-PAGE, densitometry, and BCA assays, accurately quantifying protein purity to validate downstream TFF processes with zero Out of Specification (OOS) incidents.

UPTD Laboratorium Kesehatan Provinsi Jawa Barat

Jan 2025 – Feb 2025

Biomolecular Lab Intern

- Mapped critical co-infections across 96 clinical samples via Targeted Metagenomic Sequencing (tmNGS), eliminating biological data discrepancies and delivering high-fidelity genomic intelligence that accelerated pathogen identification.
- Characterized 348 bacterial and 29 viral AMR mutations from targeted RNA sequencing data, establishing quantitative epidemiological baselines that validated the safe threshold (<5%) for West Java's public health surveillance.

Institut Teknologi Bandung

Molecular Cell Biology and Microbial Genetics Laboratory Asistant

Feb 2026 – Jun 2026

- Directed comprehensive R&D workflows for 43 practitioners, translating in silico codon optimization (SnapGene, Benchling) into successful in vitro recombinant expression by actively resolving technical bottlenecks in RT-PCR and SDS-PAGE analyses.

Coordinator Assistant of Basic Physics Laboratory

Aug 2025 – Apr 2026

- Supervised a team of 21 assistants to direct comprehensive laboratory operations for 461 students across 13 modules, implementing standardized evaluation rubrics and strict equipment maintenance protocols to ensure optimal document compliance and resource management.

Basic Microbiology Laboratory Asistant

Feb 2025 – Jul 2025

- Managed end-to-end microbial identification operations for 87 practitioners, executing modules focused on food, water, and environmental quality testing while enforcing strict aseptic protocols to maintain zero cross-contamination incidents.
- Executed stringent quality control audits on 80+ technical reports and QC documentation, validating experimental data interpretation and ensuring strict adherence to standardized GLP criteria and foundational ISO 17025.

PROJECTS

Institut Teknologi Bandung

Oct 2025 – Jul 2026

Genetic Engineering for Strain Development (Undergraduate Thesis)

- Engineered a low-endotoxin *Escherichia coli* host strain for safer pharmaceutical biomanufacturing by successfully executing an *lpxM* gene knockout, validating the precise genomic mutation with 98.9% Multiple Sequence Alignment with reference
- Evaluated mutant strain viability and growth characteristics through microbiological assays, retaining approximately 89% of wild-type specific growth rate. Successfully expressed 2 recombinant proteins for vaccine candidates, applying molecular and protein analytical techniques to evaluate experimental outcomes.

Plant Based Food Innovation (FermenStation 2025)

Feb 2025 – Jun 2025

- Developed a dairy-free corn cream cheese through pilot-scale product formulation and process optimization, evaluating chemical, physical, sensory, and microbiological characteristics to guide formulation adjustments.
- Conducted pH, texture, organoleptic, and microbiological testing throughout a 15-L pilot production process; implemented double pasteurization and EMB agar testing, achieving zero coliform detection and securing 2nd Place for Best Poster.

SKILLS AND COMPETENCIES

- Quality Assurance & Compliance** : GMP/CPOB, GLP, Food Safety Management, SOP Standardization, CAPA, ISO 17025 & ISO 22000 Awareness, Environmental Monitoring, Continuous Improvement, Quality Management System (QMS), Biosafety.
- Laboratory Quality Control** : Aseptic Technique, Coliform/Pathogen Testing, Total Plate Count (TPC), SDS-PAGE, Biochemical Assays (BCA, Bradford), *Western Blot*, Spectrophotometry, Microbial Characterization, Growth Promotion Test.
- Data Integrity**: Root Cause Analysis, Documentation, Process Validation, Bioinformatics, Microsoft Office.
- Languages** : English (Professional Working Proficiency – TOEFL ITP : 517)