

ALIFA WIDYASARI

+6285714463360 | alifa.widyasari@gmail.com | linkedin.com/in/alifawidyasari | Jakarta Selatan, DKI Jakarta

Detail-oriented IPB University Chemistry Graduate (GPA 3.72/4.00) skilled in analytical chemical testing and laboratory quality systems. Experienced in operating advanced instrumentation, including ICP-OES, AAS-HVG, UV-Vis, and potentiostats. Proven track record in method verification and validation under GLP and ISO/IEC 17025:2017 standards. Eager to contribute as a Chemical Analyst or QA/QC Specialist.

EDUCATION

IPB University - Bogor, Indonesia

Aug 2021 – Jul 2025

Bachelor of Chemistry, 3.72/4.00

- **Tanoto Foundation Scholar (TELADAN Program)** (Jan 2022 – Jun 2025) Awarded full merit-based scholarship and leadership development training through a highly competitive national selection process.
- **Undergraduate Thesis:** Electrochemical Sensor Based on Carbon Allotropes with Titanium Dioxide and Gold Nanoparticles for Detection of Bisphenol A.

EXPERIENCES

Laboratorium Analitik, Kimia IPB University

Aug 2025 – Aug 2026

Research Assistant

- **Developed and optimized an electrochemical sensor for bisphenol A (BPA) detection** based on a graphene/TiO₂/AuNRs nanocomposite.
- **Optimized composition of modification via Design of Experiments (DOE)** to systematically optimize experimental parameters and evaluate their effects on electrochemical sensor performance.
- **Synthesis of nanomaterial, electrode modification, and electrochemical measurements** to develop a sensitive and reproducible BPA detection platform.
- Performed **analytical characterization and quantitative data analysis**, including calibration, sensitivity, selectivity, precision, stability, and detection/quantification limits.
- Applied the developed sensor for **BPA detection in different sample matrices**, including formic acid, decorative coatings, and packaging materials.
- Conducted experimental optimization, troubleshooting, and interpretation of analytical results to support **analytical method development and sensor performance improvement**.

Balai Besar Kimia, Farmasi, dan Kemasan (Kementerian Perindustrian)

Sep 2024 – Nov 2024

Chemical Laboratory Analyst Intern

- **Executed trace lead (Pb) determination and method verification** across diverse sample matrices—including formic acid, decorative coatings, and packaging materials—using Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES).
- **Contributed to the analytical method validation of ASTM D3624-85a (2022)** for heavy metal testing in water-based emulsion and organic solvent decorative paints utilizing Atomic Absorption Spectrophotometry with Hydride Vapor Generator (AAS-HVG).
- **Performed analytical method verification for iron (Fe) determination** in sodium silicate via UV-Vis Spectrophotometry and verified nitrogen content analysis in commercial urea fertilizer using the Kjeldahl digestion/distillation system.
- **Conducted quantitative iodine analysis** in food-grade salt samples using volumetric titration, ensuring compliance with national standard specifications and Good Laboratory Practice (GLP).

Tropical Biopharmaca Research Center (Trop BRC)

Jun 2023 – Aug 2023

Chemical Analyst Intern

- **Optimized extraction parameters and process design** for turmeric (*Curcuma longa*) bioactive compounds using Response Surface Methodology (RSM) via **Design-Expert** software to maximize extraction yield and curcuminoid response.
- **Executed sample preparation and phytochemical extraction** utilizing shaker-assisted maceration and vacuum filtration, followed by solvent removal using a **Rotary Evaporator (Rotav)** to obtain concentrated turmeric extracts.
- **Performed GC-MS analysis and data processing** for compound identification and curcuminoid content evaluation, compiling comprehensive technical reports to support research findings.

RESEARCH PROJECT & PUBLICATION

Thesis Project

Jan 2025 – Aug 2026

Electrochemical Sensor for Bisphenol A Detection

- **Developed a nanocomposite-based electrochemical sensor** utilizing graphene, titanium dioxide (TiO₂), and gold nanoparticles and nanorods (AuNPs/AuNRs) for sensitive detection of Bisphenol A (BPA).
- **Executed nanomaterial characterization and data interpretation** using TEM, SEM-EDX, FTIR, XRD, and UV-Vis spectroscopy to evaluate structural and morphological properties.
- **Evaluated sensor electrochemical performance** through Cyclic Voltammetry (CV), Differential Pulse Voltammetry (DPV), Electrochemical Impedance Spectroscopy (EIS), and Chronoamperometry using a potentiostat.

Publication

- **Widyasari, A., et al. (2026).** "Electrochemical sensor based on a nanocomposite of graphene/TiO₂/gold nanoparticles for sensitive detection of bisphenol A." *Chemical Papers* (Scopus Q2).

CERTIFICATIONS

● SNI ISO/IEC 17025:2017 Awareness Certificate No: 744/ISOLAB/E/DDSAZ/2026	Aug 2026
● Good Laboratory Practice (GLP) Certificate No: 688/GLP/E/DDSAZ/2026	Aug 2026
● The 7 Habits of Highly Effective College Students Issued by FranklinCovey Education	Aug 2021

SKILLS

- **Analytical Instrumentation:** ICP-OES, AAS-HVG, Potentiostat (DPV, CV, EIS, Chronoamperometry), GC-MS, UV-Vis Spectrophotometry, HPLC, FTIR, XRD, SEM-EDX.
- **Laboratory Methods & Standards:** Analytical Method (Verification & Validation), Chemical Analysis, Sample Preparation, Volumetric Titration, Kjeldahl Method, Solid-Liquid Extraction (Maceration), Good Laboratory Practice (GLP), ISO/IEC 17025:2017.
- **Data Analysis & Scientific Software:** OriginPro, Design-Expert (Response Surface Methodology / DoE), Microsoft Excel, Microsoft Word, Microsoft PowerPoint.
- **Languages:** Indonesian (Native), English (Intermediate), and French (Basic)

ORGANIZATIONAL EXPERIENCES

Student Supervisory Board (DPM FMIPA) – IPB University - Bogor, Indonesia

Secretary & Treasurer of Budget Committee

Dec 2022 – Jan 2024

- **Managed and audited faculty-wide budget allocation** across multiple student executive organizations and departmental associations under FMIPA.
- **Recorded financial transactions and distributed funding** transparently, ensuring accurate budget control and financial reporting.

Chemconnect – IPB University - Bogor, Indonesia

Staff of Events Division

Aug 2023 – Nov 2023

- **Coordinated orientation and academic onboarding programs** for freshman chemistry students to introduce departmental culture, laboratory safety, and academic pathways.
- **Designed and executed event itineraries**, managing session flows and speaker engagements to ensure seamless program delivery.

Tanoto Scholars Association (TSA) – IPB University - Bogor, Indonesia

Staff of Media & Branding

Jan 2022 – Dec 2022

- **Designed digital branding assets, promotional posters, and official certificates** for organizational events and scholarship work programs.
- **Managed educational content creation** to enhance association visibility and student engagement across social media platforms.



Nomor Ijazah : 002003472012025100033
Number of Degree Certificate

Institut Pertanian Bogor

Dengan ini menyatakan bahwa

Herewith certifies that

Alifa Widyasari

NIM : G4401211064

Student ID Number

No PT : 002003

University Number

No Prodi : 47201

Study Program Number

lahir di Jakarta pada tanggal 3 Juli 2002, telah menyelesaikan dan memenuhi seluruh syarat pendidikan Sarjana

born in Jakarta on July 3, 2002, has successfully completed and fulfilled all educational requirements of the undergraduate

Program Studi Kimia, Fakultas Matematika dan Ilmu Pengetahuan Alam

Study Program of Chemistry, Faculty of Mathematics and Natural Science

dinyatakan lulus pada tanggal 28 Juli 2025 dan kepadanya diberikan gelar

She graduated on July 28, 2025 and was awarded the degree of

Sarjana Sains (S.Si.)

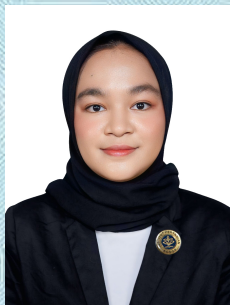
Bachelor of Science with Honours in Mathematics and Natural Science

beserta segala hak dan kewajiban yang melekat pada gelar tersebut.

with all the rights and responsibilities associated with this degree.

Diterbitkan di Bogor pada tanggal 31 Juli 2025

Granted in Bogor on July 31, 2025



**Rektor,
Rector,**

**Prof. Dr. Ari Satria, S.P., M.Si.
NIP 197109171997021003**



**Dekan Fakultas Matematika dan Ilmu Pengetahuan Alam,
Dean of Faculty of Mathematics and Natural Science,**

**Dr. Berry Juliandi, S.Si., M.Si.
NIP 197807232007011001**

