

ALIFA WIDYASARI

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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

Balai 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** Aug 2026
Certificate No: 744/ISOLAB/E/DDSAZ/2026
- Good Laboratory Practice (GLP)** Aug 2026
Certificate No: 688/GLP/E/DDSAZ/2026
- The 7 Habits of Highly Effective College Students** Aug 2021
Issued by FranklinCovey Education

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 Dec 2022 – Jan 2024

Secretary & Treasurer of Budget Committee

- **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 Aug 2023 – Nov 2023

Staff of Events Division

- **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 Jan 2022 – Dec 2022

Staff of Media & Branding

- **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.