

DEBI NURHANDRIYANI

Chemistry Graduate | R&D and Analytical Development

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Greater Jakarta Area | Willing to Relocate

PROFILE

Chemistry graduate specializing in natural product isolation, bioactive compound characterization, and analytical evaluation of plant-derived bioactive compounds relevant to pharmaceutical, cosmetic, and nutraceutical R&D. Trained in systematic chromatographic purification, multi-technique structural analysis, and scientific data validation. Combines bench-level research with laboratory analyst experience in an ISO/IEC 17025 accredited laboratory. Focused on R&D and analytical development roles in the pharmaceutical and cosmetic industries.

EXPERIENCE

Undergraduate Research — Natural Product Chemistry

Organic Chemistry Research Laboratory, Universitas Negeri Jakarta

Jan – Dec 2025

- Isolated and purified two triterpenoid compounds via iterative multi-stage chromatography (VLC, Radial, Size-Exclusion/Sephadex LH-20) with solvent system optimization at each stage.
- Navigated repeated purification challenges and low-yield fractions to successfully isolate two triterpenoid compounds.
- Evaluated DPPH free-radical scavenging activity and performed UV-Vis, FTIR, and 1D/2D NMR spectral data interpretation for structure elucidation, relevant to bioactive ingredient screening in cosmetic, nutraceutical, and pharmaceutical R&D.
- Assessed EGFR and VEGFR-2 inhibition potential through molecular docking, detected thermodynamic inconsistency in BIOVIA 2024 output, and revalidated the study using BIOVIA 2016 to preserve data integrity.

Laboratory Assistant — Instrumental Analytical Chemistry

Instrumental Analytical Chemistry Lab, Universitas Negeri Jakarta

Mar – Jul 2025

- Prepared reagents and ensured compliance with K3 safety standards and SOPs across analytical chemistry laboratory sessions.
- Comprehensively assessed student performance through pre/post-test assessments, laboratory reports, and written practical examinations.
- Coordinated with supervising lecturers and laboratory technicians to maintain smooth laboratory operations and procedural consistency.

Laboratory Analyst Intern — Water Chemistry Laboratory

Laboratorium Kesehatan Daerah (Labkesda) Provinsi DKI Jakarta

Aug – Nov 2024

- Conducted UV-Vis spectrophotometric analysis of hexavalent chromium within an ISO/IEC 17025 accredited environment (SNI 6989.71:2009), ensuring GLP and SOP compliance, prepared multipoint calibration curves and standard solutions across 1,000+ samples.
- Performed pH measurement and TSS photometric analysis, assisted with complexometric (EDTA) titration for hardness analysis, COD, TDS, and semi-quantitative colorimetric chlorine testing.
- Identified reagent deviation as root cause of anomalous results through systematic troubleshooting in collaboration with supervisors.

EDUCATION

Universitas Negeri Jakarta — Bachelor of Science in Chemistry

Graduated 2026

GPA: 3.65/4.00

TECHNICAL SKILLS

Natural Product & Bioactives: Compound Isolation & Purification, Column Packing, Chromatography (VLC, Radial, TLC, Size-Exclusion/Sephadex LH-20), DPPH Antioxidant Assay.

Structural & Molecular Analysis: UV-Vis, FTIR, 1D/2D NMR (spectral data interpretation), Molecular Docking (BIOVIA Discovery Studio, AutoDock Tools).

Laboratory Instrumentation & Standards: UV-Vis Spectrophotometer, Colorimeter/Photometric Analyzer (COD, TSS), pH Meter, Rotary Evaporator | GLP & SOP, ISO/IEC 17025, Micropipette, Vortex Mixer, Centrifuge LAF Cabinet.

Analytical Methods: Multipoint Calibration Curve Preparation, Titrimetry (Acid-Base, Complexometric/EDTA), Semi-quantitative Colorimetric Testing (Chlorine), Colorimetric & Photometric Analysis, Sample Preparation.

Scientific Tools: ChemDraw, Chem3D, Microsoft Excel (calibration curves, regression analysis).

LANGUAGES

TEP Score 540 (310-677) — Language Center, Universitas Negeri Jakarta (2025).