

SYAFIK SANTOSA

Analytical Chemist | Laboratory Analyst | Quality Control | Research & Development 089636376060
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Profile

Chemistry graduate from Universitas Gadjah Mada with hands-on experience in analytical chemistry, quality control, and industrial laboratory operations. Experienced in ICP-OES, AAS, GC, IC, XRD, and SEM-EDX while working within ISO/IEC 17025:2017, ISO 9001:2015, and Good Laboratory Practices (GLP) environments. Selected as the only intern among five internship students to collaborate with Agilent Technologies on ICP-OES analytical method development.

Education

- Universitas Gadjah Mada** **Jul 2022 – Jul 2026**
Bachelor of Science in Chemistry
GPA: 3.37/4.00

Experience

- Universitas Gadjah Mada** **Feb 2026 – Jul 2026**
Lab Assistant -Yogyakarta
 - Guided and supervised more than 80 undergraduate students during analytical chemistry laboratory practical sessions.
 - Delivered instruction on electrochemical experiments, laboratory procedures, laboratory safety (K3), and proper operation of analytical equipment.
 - Assisted in laboratory preparation, experiment supervision, and troubleshooting to ensure efficient laboratory activities.
- Laboratorium Penelitian dan Pengujian Terpadu UGM** **Nov 2025 – Feb 2026**
Researcher - Yogyakarta
 - Performed morphological and elemental characterization using SEM-EDX in accordance with Good Laboratory Practices (GLP).
 - Optimized sample preparation techniques and analytical workflow, increasing laboratory throughput to approximately 2 samples per hour.
 - Interpreted SEM-EDX analytical data to support materials characterization and ongoing research activities.
- PT Pertamina Geothermal Energy** **Feb 2025 – May 2025**
Laboratory Analyst Intern - Kamojang, West Java
 - Selected as the only intern among five internship students to collaborate with Agilent Technologies on developing an ICP-OES analytical method for geothermal sample analysis.
 - Performed routine chemical analysis of 100+ samples/day using ICP-OES and 50+ samples/day using AAS, while operating GC, IC, XRD, spectrofluorometer, titration, and distillation systems in an ISO/IEC 17025:2017 accredited laboratory.
 - Applied Good Laboratory Practices (GLP) while working within an integrated quality management system aligned with ISO/IEC 17025:2017 and ISO 9001:2015, supporting laboratory quality assurance and analytical reliability.

Skills

- Hard skills:** Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES), Atomic Absorption Spectroscopy (AAS), Gas Chromatography (GC), Ion Chromatography (IC), X-Ray Diffraction (XRD), X-Ray Fluorescence (XRF), High Performance Liquid Chromatography (HPLC), Spectrofluorometer, UV-Vis Spectrophotometry, FTIR, Kjeldahl Distillation, Sample

Preparation, Quality Control (QC), Good Laboratory Practices (GLP), Titration, Data Analysis, Microsoft Word and Excel, Supply Chain Management and Procurement.

- **Soft skills:** Adaptability, agility, problem-solving, good time management, leadership, critical thinking, analytical communication, ability to work well in a team.
- **Language:** Indonesia (Profesional), Inggris (Profesional, TOEFL ITP Prediction: 563).

Certificate and Training

- Training (2025): Teknik Penyimpanan dan Penanganan Bahan Kimia Sesuai SKKNI dan SNI Terbaru - Labmania Indonesia
- Training (2025): Manajemen Laboratorium Tipe B - Universitas Gadjah Mada
- Training (2024): Pengelolaan Limbah Bahan Berbahaya dan Beracun - PT. Exagama Merapi Sertifikasi
- Training (2024): Environment Officer - PT. Exagama Merapi Sertifikasi
- Training (2024): Wastewater Treatment Plant - PT. Teman Group Indonesia
- Training (2022): Manajemen Laboratorium Tipe A - Universitas Gadjah Mada.

Project

- **Karakterisasi dan Uji Kinetika Desorpsi Humus Komersial Berbasis Bulu Ayam dan Sekam Padi terhadap Makronutrien N dan Mikronutrien Fe pada Tanah Ultisol**
Researcher Mar 2025 – May 2025
 - Collaborated with CV Humus and PT Kaltim Prima Coal to develop keratin-based commercial humus from livestock and agricultural waste.
 - Evaluated nutrient retention and desorption behavior in Ultisol soils through physicochemical characterization.
 - Improved soil quality by increasing total nitrogen by 102%, CEC by 61%, organic matter by 18.8%, and soil pH to 6.0–6.4.
- **Development of an Analytical Method Using ICP-OES Based on L-Cysteine Interaction in Geothermal Samples at PT Pertamina Geothermal Energy Tbk Area Kamojang**
Laboratory Analyst and Research Intern Apr 2025 – May 2025
 - Developed a multi-element ICP-OES analytical method based on L-cysteine interactions for geothermal sample analysis.
 - Collaborated with PT Pertamina Geothermal Energy and Agilent Technologies in optimizing analytical conditions for 19 target elements.
 - Achieved excellent analytical performance with correlation coefficients ($R > 0.99$) for the majority of analytes and analytical precision below 2% RSD.
- **Verification of an Analytical Method for Fe, Si and Ca in Geothermal Samples Using Inductively Coupled Plasma Emission Spectroscopy (ICP-OES)**
Laboratory Analyst and Research Intern Mar 2025 – May 2025
 - Verified analytical methods for determining **Fe, Si, and Ca** concentrations in geothermal liquid and rock samples.
 - Evaluated analytical performance including calibration linearity, recovery, precision, repeatability, detection limits, and matrix effects.
 - Achieved **93–104% recovery** and **RSD below 1%**, confirming method suitability under geothermal sample conditions.

Organizational Experience

- **Keluarga Mahasiswa Kimia UGM** Okt 2023 – Nov 2024
 - Selected as the medical and consumption team coordinator for a national-level futsal event organized by the university, managing over 200 participants.

- Selected as the medical and catering team coordinator for a sports event organized by a faculty-level organization, managing over 100 participants.