

FADHILA KUSUMA ASTRI

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Sragen, Central Java - Open to relocation

PROFILE

Chemistry graduate with hands-on experience in analytical chemistry, quality control, laboratory research, and product development. Skilled in analytical method validation and development, HPLC and GC analysis, physicochemical testing, formulation, and instrumental characterization. Detail-oriented, adaptable, and a strong communicator, with a strong interest in applying chemistry knowledge to analytical testing, QA/QC, R&D, and industrial product development.

EDUCATION

Brawijaya University

Bachelor of Science in Chemistry

Cumulative GPA: 3.73/4.00

Malang, Indonesia

September 2022 - July 2026

WORK AND RESEARCH EXPERIENCES

Undergraduate Thesis

Bawijaya University

Development of Ni@Ag Core-Shell Nanoparticles as a Colorimetric Sensor

February - June 2026

- Developed and optimized honey-stabilized Ni@Ag core-shell nanoparticles through a green synthesis approach.
- Optimized honey concentration and reaction time, and characterized the nanoparticles using UV-Vis, FTIR, XRD, FESEM-EDX, and TEM.
- Developed and evaluated a Ni@Ag nanoparticle-based colorimetric sensing method for rapid detection of *Staphylococcus aureus*.

Laboratory Teaching Assistant

Brawijaya University

Basic and Analytical Chemistry Laboratory

February - June 2026

- Assisted in conducting Basic and Analytical Chemistry laboratory sessions with up to 40 students per class, covering redox reactions, binary-solution distillation, and solvent extraction.
- Guided students in chemical handling, experimental techniques, laboratory equipment, procedures, and safety protocols throughout laboratory sessions.
- Assisted students with experimental observations, calculations, data processing, and interpretation of laboratory results, while supporting the smooth implementation of laboratory activities.

PT Petrokimia Kayaku

Gresik, Indonesia

Laboratory Analyst Intern

August - October 2025

- Conducted HPLC method validation for the determination of Clomazone and Propanil in agrochemical products.
- Performed method optimization and development for Brodifacoum 0.005 BB rodenticide finished products.
- Conducted finished-product quality control testing, including viscosity, specific gravity, moisture content, density, wetting time, pH, bulk density, emulsion stability, PSA, and LTS.
- Operated HPLC and GC for quantitative determination of active ingredients in finished products.
- Performed sample preparation, analytical measurements, data processing, and analytical result evaluation in accordance with established laboratory testing procedures.

Academic Product Development Project

Brawijaya University

Topical Solid Perfume Formulation

February - June 2025

- Developed and optimized 3 formulation variants of a topical solid perfume using lemon and jasmine essential oils.
- Evaluated product characteristics and formulation performance based on relevant quality parameters in accordance with SNI 16-4769-1998.
- Applied formulation development, ingredient selection, and product evaluation principles to determine the optimal product composition.

SKILLS

- Technical: HPLC, GC, UV-Vis Spectrophotometry, FTIR, Analytical Method Validation, Method Development & Optimization, Quality Control, Formulation Development, Data Analysis
- Soft Skills: Attention to Detail, Analytical Thinking, Problem Solving, Communication, Teamwork, Time Management, Adaptability
- Software: Microsoft Office (Word, Excel, PowerPoint)