



### the Pharmaceutical Analysis Group

Great values contribution in pharmaceutical, and foods manufacturing.

The focus of our research group is analytical development and validation of chromatographic, spectroscopic, electrochemical and microbiological method for the analysis of pharmaceuticals and chemicals in pharmaceutical preparations, herbal products, food, cosmetics, health supplements and biological samples.

Our objective is to develop a new, simple, rapid, and sensitive validated analytical methods applied for identification, assay, dissolution, pharmaceutical impurities and drug residues testing as well as for supporting the research and development of novel drugs. In the field of bioanalysis, our interest is devoted to the development of methods for quantitation of potential drugs and their metabolites in body fluids related to bioavailability and bioequivalence study purposes.

The main analytical approach comprises of FTIR, AAS, UV-Vis spectrometry, TLC/HPTLC-Spectrodensitometry, GC-FID, Headspace GC-MS, HPLC with different type of detectors (UV-Vis, PDA, RID, ELSD, FLD) and LC-MS/MS,

The topics of the method development closely correspond with the current issues of the requirements issued by WHO, FDA, EMA and the National Agency of Drug and Food Control (Badan POM RI).



### **Vision:**

To be a reliable and trusted pharmaceutical analysis research group in developing analytical methods relevant to the demands of national and international quality standards.

### **Mission:**

- Planning and establishing a reliable research group (RG) profile in responding to the demands of the development of science and technology analysis of raw materials, pharmaceutical preparations, food beverages and other relevant materials.
- Developing and validating analysis methods in accordance with the terms and conditions of national and international standards
- Conducting research in the field of pharmaceutical analysis based on substances and methods and their development
- Involving undergraduate, postgraduate, phd students, both from the faculty of pharmacy and Airlangga university as well as from institutions at home and abroad in each relevant program.
- collaborating with accreditation agencies or other agencies relevant to the scope of pharmaceutical analysis development
- Networking with relevant associations and/or research institutions
- for research fundraising.
- Integratedly develop networks with other programs in the field of education and service
- to the community.
- Motivate and contribute to the program of strengthening downstream results research, so can be felt by the community.



## Research :

Substance analysis development: Isolates of natural materials, (plants, soil, water, marine products, microorganisms, animals); Semi-synthetic, Synthetic. Raw materials Preparations of drugs, cosmetics, food, beverages, functional food, medical devices Biological samples: blood (serum and plasma), urine, sputum Contamination:: heavy metals, pesticides, hazardous and toxic materials.

**Methods:** Spectroscopy, chromatography, Electrochemistry, Microbiology, Combination, e.g. bioautography, LC-MS, GC-MS, LC-MS-MS, TLC-densitometry. Equipped with visualization

## Facilities:

laboratory equipments and instruments, statistical analysis software, e-books and accessible e-journals

Facilities that can be accessed from the results of cooperation with universities abroad through staff who are studying abroad



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