UGM Lab Has Molecule Structure Tester

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Vice-Rector for Research and Community Service, Prof. Dr. Suratman, M.Sc., has launched Nuclear Magnetic Resonance (NMR) 500 MHz spectrometer for service facilities in the Integrated Research and Testing Laboratory of Universitas Gadjah Mada (LPPT UGM). This facility can support research projects on campus. “This equipment can be used to increase research by lecturers and students,” said Prof Suratman during the handover of the equipment in the LPPT Hall of UGM on Thursday (18/2).

Suratman said the equipment could be used by researchers or companies outside UGM to study the structure of molecule, interaction between molecules, kinetics or dynamics of molecules and composition of biology compounds, solution resulted from synthesis or composite. The equipment can also trigger research cooperation between institutions or universities or industry. “This is a sophisticated lab equipment and is the first inYogyakarta and Central Java with 500 MHz resolution,” he explained.

Head of LPPT UGM, Dr. Tri Joko Raharjo, M.Si., said the NMR 500 MHz added to the technique in establishing molecule structure and other analytic techniques they already have, such as spectroscopy IR (Infra Red), spectroscopy UV-Vis (Ultra Violet-Visible), MS (Mass Spectrometry), and X-Ray Crystallography.

The NMR spectrometer has better specifications as it has unique abilities for analysis that does not damage samples and able to do quantitative analysis of molecule in solution. He said the application of NMR 500 MHz Spectrometer very much supports researches in structure elucidation, medical and

health, proteomics, molecular biology, membrane protein and drugs. “This application is very needed by UGM researchers,” he said.

He hoped the equipment would lead to the founding of Interdisciplinary Research Group on Nuclear Magnetic Resonance at UGM, increasing interdisciplinary researches in health, biology, chemical synthesis, isolation and metabolomics. “Publications from UGM are also expected to increase,” he said.

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