ABSTRACT

DEVELOPMENT VIRTUAL LABORATORY FOR ANALYTICAL CHEMISTRY SUBJECT

By:

Rizki Abadi

10110609

Chemistry is an experimental science, the lessons are accompanied by laboratory experiments to prove the theory they have learned in class. Takes place in a laboratory practicum fact, the laboratory has weaknesses and problems, such as lack of tools and lab materials, lab materials that are sensitive to human skin which could pose a danger to the practitioner, in addition to the student also does not have an overview of practical activities.

The virtual lab is built as an alternative means students learn the material in analytical chemistry as well as to give students an idea before doing the lab without having to go to the lab and the purchase of materials and practical tools. This application also can minimize the occurrence of accidents that can result in injury praktikan. This application is also in support of the Ministry of Education regulations that encourage colleges use technology and information in the learning process. This application is built with Adobe flash programming and programming language ActionScript 3. Data collection techniques by way of literature study and observation. Methods of making software using waterfal Model, as well as data modeling using object-oriented method.

Based on the implementation and testing conducted on students who took the course analytical chemistry, with the construction of a virtual laboratory applications, can help students in the learning material analytical chemistry, as well as provide an overview of the practical analysis of qualitative and quantitative analysis before doing laboratory experiments.

Keywords: virtual laboratories, analytical chemistry, waterfall, Adobe flash, Action script 3