ABSTRAK

Tujuan penelitian ini adalah membuat modul elektronik sebagai media bahan ajar yang interaktif serta menguji kelayakannya untuk digunakan oleh Mahasiswa. Metode penelitian yang digunakan yaitu *research and developmen*t, yaitu menganalisis apa yang dibutuhkan oleh mahasiswa, kemudia membuat modul elektronik, lalu diaplikasikan dalam pembelajaran. Penelitian dilakukan pada mahasiswa semester V dan VII yang sudah mempelajari kimia organik. Hasil penelitian menunjukkan bahwa modul elektronik yang dibuat memiliki interaktifitas sehingga mahasiswa mampu memahami konsep amina dengan visualisasi makroskopik, submikroskopik, dan simbolik. Responder sebanyak 100% merasakan kebermanfaatan, minat, dan motivasi dalam menggunakannya. Adapun berdasarkan hasil validasi pada aspek isi modul r_{hitung} rata-rata sebesar 0,90; pada aspek pembelajaran r_{hitung} rata-rata 0,81, sedangkan pada aspek tampilan r_{hitung} rata-rata 0,83 sehingga dapat disimpulkan bahwa modul elektronik ini layak untuk digunakan dalam mempelajari konsep amina.

Kata kunci: amina, modul elektronik, tiga level representasi

ABSTRACT

Amina is one of the concepts in organic chemistry that is difficult for students to understand because it is abstract, so students cannot connect understanding between macroscopic-level phenomena, submicroscopic levels, and symbolic levels on the concept of amines. Therefore, it takes a learning medium that can help explain the three levels of representation interactively. The purpose of this research is to create electronic modules as a medium of interactive teaching materials as well as test their feasibility for use by students. The research method is done with research & development, which is to analyze what is needed by students, then create electronic modules, and then applied in learning. The research was conducted on third semester students who have studied organic chemistry. The results showed that the electronic modules created had an interactiveity so that students were able to understand the concept of amines with macroscopic, submicroscopic, and symbolic visualizations. Responders as much as 100% feel the benefits, interests, and motivation in using it. Based on appearance and content, responders rate 85% and 90% respectively. The conclusion is that this electronic module is worth using in studying the concept of amines.

Keywords: amine, electronic module, three level of representation