ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui kelayakan LKS praktikum pada topik larutan penyangga melalui penentuan sifat sistem penyangga dalam minuman. Metode penelitian yang digunakan adalah penelitian dan pengembangan yang terdiri dari studi pendahuluan (studi kepustakaan, survei lapangan dan penyusunan produk awal) dan pengembangan model (uji terbatas). Sumber data yang digunakan berupa delapam buku kimia dan dua LKS Praktikum kelas XI, 18 siswa kelas XI salah satu SMA di Bandung, tujuh guru kimia SMA di Bandung, dan tiga dosen Departemen Pendidikan Kimia FPMIPA UPI. Instrumen penelitian yang digunakan berupa lembar analisis LKS praktikum, pedoman wawancara, lembar optimasi, lembar observasi keterlaksanaan tahapan inkuiri, rubrik penilaian jawaban siswa terhadap tugas-tugas dalam LKS, format penilaian guru dan dosen terhadap LKS yang dikembangkan serta angket respon siswa. Hasil analisis LKS praktikum yang ada di sekolah dan survei lapangan menunjukkan karakteristik LKS praktikum yang ada di sekolah berupa instruksi langsung/*cookbook*. Kondisi optimum prosedur praktikum yang dikembangkan adalah volume sampel yang digunakan 7 mL. Sampel yang digunakan adalah larutan NaCl 0,1 M dan minuman jus buah kemasan *merk* A/B. Penambahan asam, basa dan pengenceran dilakukan hingga 25 tetes. Pemeriksaan pH dilakukan setiap penambahan lima tetes asam, basa atau *aquades*. Waktu praktikum adalah 30 menit. Keterlaksanaan LKS praktikum yang dilihat berdasarkan keterlaksanaan tahapan inkuiri sangat baik (100%) sedangkan apabila dilihat berdasarkan jawaban siswa terhadap tugas-tugas dalam LKS tergolong baik (78%). Penilaian guru dan dosen terhadap LKS praktikum pada aspek kesesuaian konsep adalah sangat baik (80,1%), kesesuaian tata bahasa adalah baik (79,22%), dan kesesuaian tata letak serta perwajahan adalah baik (79,26%). Respon siswa terhadap LKS praktikum yang dikembangkan tergolong baik (75,27%).

Kata kunci: Inkuiri Terbimbing, Lembar Kerja Siswa, Sistem Penyangga

ABSTRACT

The aim of this research was to to determine the feasibility of practical worksheets on topics buffer solution through the determination of the nature of the buffer system in beverages. This research applied research and development method that consists of preliminary studies (literature studies, field surveys and the preparation of initial product) and the development of models (a limited test). Data source used were gathered through chemistry teaching materials (books and worksheets), students of XI class in Bandung Senior High School, Senior High School Chemistry teachers in Bandung, and chemistry lecturers in Chemistry Departement of Chemistry Education, FPMIPA UPI. The research instruments used were analysis sheet for buffer solution lab worksheet, interview guided, optimization sheet, implementation of inquiry phases observation sheet, assessment guidelines for students'answers related to worksheet tasks, assessment sheet given to teachers and lecturers and students questionnaire responses. The result of analysis about lab worksheet in the school and field surveys show the characteristics of lab worksheet in the school still direct instruction/cookbook. The optimum condition lab procedures developed is the volume of the sample used 7 ml. The samples used were 0.1 M NaCl solution and bottled fruit juice drinks brand A / B. The addition of acids, bases and dilution made up to 25 drops. PH probe conducted every additional five drops of acid, alkaline or distilled water. Lab time is 30 minutes. Lab worksheet implementation which is based on the inquiry phases that conducted by student were found very good (100%), while when seen by the students' answers to tasks in lab worksheet classified as good (78%). The Assessment of teachers and lecturers are not aligned with Worksheet lab on aspects of suitability concept is good (80.1%), suitability grammar is good (79.22%), and suitability the layout and appearance of is good (79.26%). The response of students toward lab worksheet developed is good (75,27%) in this research.

Keyword: Buffer System, Guided Inquiry, Lab Worksheet