

## ABSTRAK

Penelitian ini bertujuan untuk mengembangkan dan menghasilkan LKS praktikum berbasis inkuiri terbimbing pada topik sifat kimia alkohol dalam tapai ketan. Metode penelitian yang digunakan adalah penelitian dan pengembangan yang dilakukan sampai pada tahap uji coba terbatas. Sumber data berupa bahan ajar praktikum Kimia SMA (buku dan LKS) yang berjumlah 18 buah, data optimasi prosedur praktikum, 20 orang siswa kelas XII SMA di kota Bandung, 7 orang guru Kimia SMA di kota Bandung, dan 3 orang 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 penelitian jawaban siswa terhadap tugas-tugas pada LKS, lembar penilaian guru dan dosen, serta angket respon siswa. Karakteristik LKS praktikum sifat kimia alkohol yang ada di sekolah, ditinjau berdasarkan ketersediaan informasi alat, bahan dan prosedur, termasuk dalam LKS praktikum dengan tipe langsung (*cookbook*). Hasil optimasi prosedur praktikum sifat kimia alkohol dalam tapai ketan sebagai berikut : reaksi oksidasi air tapai ketan berlangsung dalam suasana netral (tanpa penambahan asam) dengan oksidator  $\text{KMnO}_4$  0,1 M sebanyak 0,25 mL (5tetes), dan volume air tapai ketan sebanyak 3 mL tanpa pengenceran. Keterlaksanaan praktikum menggunakan LKS praktikum yang dikembangkan, berdasarkan tahap-tahap inkuiri tergolong sangat baik, dan dari jawaban siswa terhadap tugas-tugas yang diberikan dalam LKS praktikum tergolong sangat baik. Penilaian guru dan dosen terhadap LKS praktikum yang dikembangkan pada aspek kesesuaian konsep, tata bahasa, serta tata letak dan perwajahan tergolong sangat baik. Respon siswa terhadap LKS praktikum yang dikembangkan dan terhadap pelaksanaan praktikum menggunakan LKS praktikum yang dikembangkan tergolong sangat baik. Kata kunci : Inkuiri Terbimbing, LKS Praktikum, Sifat Kimia Alkohol dalam Tapai Ketan

## ABSTRACT

This research aims to developed and produce a lab worksheets based on a guided inquiry with the topic chemical properties of alcohol in glutinous rice fermented. The research method used is research and development carried out until limited testing. The data source is high school chemistry lab instructional materials (books and LKS) amounting to 18 pieces, data of optimization lab procedures, 20 students of the XII grade of SMA in Bandung, 7 teachers for chemistry teachers of SMA in Bandung, and the 3 lecturers of Department of Chemistry Education of FPMIPA of UPI. The instruments used were sheet analysis for lab worksheets, interview guides, design optimization, observation sheet, rubric for scoring student's answer related to the worksheet task, assesment sheets given to teachers and lecturers, and questionnaire students' responses. The characteristic of lab worksheets chemical properties of alcohol in SMA in Bandung, reviewed by the availability of information tools, materials, and procedures, including the cookbook lab worksheets. The optimization result of experiment chemical properties of alcohol in glutinous rice fermented: glutinous rice fermented oxidation reaction takes places in a neutral condition (without the addition of acid) with an oxidant  $\text{KMnO}_4$  0,1 M 0,25 mL (5 drops), and volume of glutinous rice fermented filtrate is 3 mL with no dilution. Eligibility lab worksheets were developed based on the stage of inquiry categorized very good and of the students' answers to the task in the worksheets was categorized into very good. The evaluation designated teacher and lecturers of the developed student worksheet based on the suitability of the concept, grammar, layout and appearance was categorized into very good. Students' responses of the experiment using the developed worksheet and the implementation of experiment using the developed worksheet was categorized into very good.

Key words : Guided inquiry, Lab worksheets, Chemical Properties of Alcohol in Glutinous Rice Fermented.