ABSTRAK

EFEKTIVITAS MODEL PEMBELAJARAN *GUIDED INQUIRY* BERBASIS *GREEN CHEMISTRY* UNTUK MENINGKATKAN KETERAMPILAN PROSES SAINS PADA MATERI KESETIMBANGAN KIMIA

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Penelitian ini bertujuan untuk mendeskripsikan efektivitas model pembelajaran *guided inquiry* berbasis *green chemistry* dalam meningkatkan keterampilan proses sains pada materi kesetimbangan kimia. Metode penelitian yang digunakan adalah kuasi eksperimen dengan desain *pretest-posttest control group*. Populasi dalam penelitian ini adalah seluruh siswa kelas XI SMA Negeri 1 Gedong Tataan Tahun Ajaran 2025/2026. Sampel penelitian adalah kelas XI 8 dan XI 9 yang dipilih melalui teknik *purposive sampling*, kemudian dilakukan pengundian sehingga kelas XI 8 ditetapkan sebagai kelas eksperimen dan kelas XI 9 sebagai kelas kontrol. Instrumen yang digunakan yaitu soal pretes dan postes, dan lembar keterlaksanaan model pembelajaran. Analisis data meliputi perhitungan n-gain rata-rata dan keterlaksanaan pembelajaran. Uji hipotesis menggunakan uji *independent sample t-Test*. Berdasarkan hasil analisis data menunjukkan n-gain rata-rata kelas eksperimen adalah 0,62 berkategori sedang. Hasil uji hipotesis menunjukkan bahwa rata-rata skor postes keterampilan proses sains kelas eksperimen lebih tinggi dibandingkan kelas kontrol. Dapat disimpulkan bahwa model pembelajaran *guided inquiry* berbasis *green chemistry* efektif untuk meningkatkan keterampilan proses sains pada materi kesetimbangan kimia.

Kata kunci: *guided inquiry*, *green chemistry*, keterampilan proses sains, kesetimbangan kimia

ABSTRACT

THE EFFECTIVENESS OF GUIDEDINQUIRY LEARNING MODEL BASED ON GREEN CHEMISTRY TO IMPROVE SCIENCE PROCESS SKILLS IN CHEMICAL EQUILIBRIUM TOPIC

By

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This study aims to describe the effectiveness of the guided inquiry learning model based on green chemistry in improving science process skills on the topic of chemical equilibrium. The research method used is a quasi-experiment with a pretest-posttest control group design. The population in this study was all students in grade XI at SMA Negeri 1 Gedong Tataan in the 2025/2026 academic year. The research sample consisted of classes XI 8 and XI 9, which were selected using purposive sampling, followed by a lottery to determine class XI 8 as the experimenttal class and class XI 9 as the control class. The instruments used were pretest and posttest questions and a learning model implementation sheet. Data analysis included calculating the average n-gain and learning implementation. The hypothesis was tested using an independent sample t-test. Based on the results of the data analysis, the average n-gain of the experimental class was 0.62, which is categorized as moderate. The results of the hypothesis test showed that the average post-test score for science process skills in the experimental class was significantly higher than that of the control class. It can be concluded that the guided inquiry learning model based on green chemistry is effective in improving science process skills in chemical equilibrium topic.

Keywords: guided inquiry, green chemistry, science process skills, chemical equilibrium