INOVASI PENUNTUN PRAKTIKUM *GREEN CHEMISTRY* UNTUK SISWA SMA KELAS XI SEMESTER GANJIL

Nur Fatni Amirah Harahap (NIM. 8206142007)

ABSTRAK

Penelitian ini bertujuan untuk mengetahui (1) hasil analisis kebutuhan dalam rangka pengembangan penuntun praktikum berbasis *Green Chemistry* (2) tingkat kelayakan penuntun praktikum berbasis *Green Chemistry* yang dikembangkan menurut standart BSNP, (3) keterampilan proses sains siswa setelah menggunakan penuntun praktikum berbasis *Green Chemistry*, (4) sikap peduli lingkungan siswa setelah menggunakan penuntun praktikum berbasis *Green Chemistry*, (5) hasil belajar siswa setelah menggunakan penuntun praktikum berbasis *Green Chemistry* dan (6) respon siswa setelah menggunakan penuntun praktikum berbasis *Green Chemistry*. Metode penelitian yang digunakan yaitu metode penelitian dan pengembangan (R&D) dengan model ADDIE yaitu *Analysis*, *Design*, *Development*, *Implementation*, dan *Evaluation*. Instrumen pengumpulan data menggunakan instrumen test dan non test. Instrumen non test berupa angket yang berisi standar kelayakan penuntun praktikum berbasis *Green Chemistry* berdasarkan BSNP, lembar observasi keterampilan proses sains, lembar observasi dan angket sikap peduli lingkungan dan angket respon siswa yang dianalisis secara deskriptif. Instrumen tes berupa soal pilihan berganda, data dianalisis secara statisitik dengan uji SPSS *One Sample T-Test* dibandingkan dengan nilai KKM (Kriteria Ketuntasan Minimal). Data dianalisis Penelitian dilakukan di SMA Swasta Sultan Iskandar Muda Medan kelas XI IPA 2. (1) Hasil analisis kebutuhan adalah dengan menambahkan aspek-aspek *Green Chemistry* dan beberapa perbaikan yang sesuai dengan hasil analisis. (2) Tingkat kelayakan penuntun yang dikembangkan memperoleh rata-rata 88% (sangat layak). (3) Keterampilan proses sains siswa memperoleh rata-rata 89 (sangat tinggi). (4) Sikap peduli lingkungan siswa memperoleh presentase 95,94% (sangat baik). (5) Hasil belajar siswa lebih tinggi dari KKM dengan 86,9 (baik) nilai Sig. (2-tailed) < 0,05 yaitu 0,000. (6) Respon siswa memperoleh presentase 98,46% (sangat baik).

Kata Kunci *: Green Chemistry, Keterampilan Proses Sains, Sikap Peduli Lingkungan, Hasil Belajar, Respon Siswa*

GREEN CHEMISTRY PRACTICUM GUIDE INNOVATION FOR STUDENTS OF HIGH SCHOOL CLASS XI ODD SEMESTER

Nur Fatni Amirah Harahap (NIM. 8206142007)

ABSTRACT

This study aims to determine (1) the results of needs analysis in the context of developing Green Chemistry-based practicum guides (2) the feasibility level of Green Chemistry-based practicum guides developed according to BSNP standards, (3) students' science process skills after using Green Chemistry-based practicum guides, (4) the environmental care attitude of students after using Green Chemistry-based practicum guides, (5) student learning outcomes after using Green Chemistry-based practicum guides and (6) student responses after using Green Chemistry-based practicum guides. The research method used is the research and development (R&D) method with the ADDIE model, namely Analysis, Design, Development, Implementation, and Evaluation. The data collection instrument uses test and non-test instruments. Non-test instruments in the form of questionnaires containing standards of eligibility for practicum guides based on Green Chemistry based on BSNP, science process skill observation sheets, observation sheets and environmental care attitude questionnaires and student response questionnaires were analyzed descriptively. The test instrument was in the form of multiple choice questions, the data were analyzed statistically with the SPSS One Sample T-Test compared to the KKM (Minimum Completeness Criteria) score. The data were analyzed. The research was conducted at the Sultan Iskandar Muda Private High School, Medan, class XI IPA 2. (1) The results of the needs analysis added aspects of Green Chemistry and made several improvements according to the results of the analysis. (2) The feasibility level of the developed guide obtains an average of 88% (very feasible). (3) Students' science process skills get an average of 89 (very high). (4) The attitude of caring for the environment of students gets a percentage of 95.94% (very good). (5) Student learning outcomes are higher than KKM with 86.9 (good) Sig. (2-tailed) < 0.05 which is 0.000. (6) Student responses obtained a percentage of 98.46% (very good).

Keywords: Green Chemistry, Science Process Skills, Environmental Care Attitudes, Learning Outcomes, Student Responses