

ABSTRAK

Nur Qadri Fahri: Pengembangan Laboratorium Virtual Berbasis Android Pada Praktikum Daya Oksidasi Unsur Halogen

Penelitian ini bertujuan untuk mendeskripsikan tampilan, menganalisis hasil uji validasi dan hasil uji kelayakan dari media pembelajaran laboratorium virtual berbasis android pada praktikum identifikasi daya oksidasi unsur halogen. Metode yang digunakan yaitu *Design Based Research* (DBR) dengan tiga tahap diantaranya analisis, desain, dan pengembangan. Tampilan laboratorium virtual ini memiliki dua halaman utama diantaranya halaman pertama berisi informasi kompetensi dasar, indikator pembelajaran, dasar teori dan video pembelajaran yang berubungan dengan praktikum. Sedangkan halaman kedua berisi *pre-test*, daftar alat dan bahan, MSDS, praktikum sintesis gas halogen, praktikum daya oksidasi unsur halogen, *post-test*, serta skor *pre-test* dan *post-test*. Produk awal media pembelajaran laboratorium virtual divalidasi oleh dua validator materi dan tiga validator media. Hasil uji validasi materi memperoleh nilai rata-rata r_{hitung} yaitu sebesar 0,8286 dengan kategori valid. Sementara itu, hasil uji validasi media memperoleh nilai rata-rata r_{hitung} yaitu sebesar 0,9125 dengan kategori valid. Media yang telah diperbaiki dilakukan uji kelayakan kepada 10 responden memperoleh rata-rata 86,88% dengan kriteria layak. Dengan demikian, laboratorium virtual dinyatakan valid dan memiliki interpretasi kelayakan yang tinggi sehingga dapat digunakan sebagai media pembelajaran pada praktikum daya oksidasi unsur halogen.

Kata Kunci: Laboratorium virtual, daya oksidasi



ABSTRACT

Nur Qadri Fahri: *Development of an Android-Based Virtual Laboratory in the Practicum on the Oxidation Power of Halogen Elements*

This research aims to describe the appearance, analyze validation test results and feasibility test results from Android-based virtual laboratory learning media in the practical identification of the oxidation power of halogen elements. The method used is Design Based Research (DBR) with three stages including analysis, design and development. This virtual laboratory display has two main pages, including the first page containing information on basic competencies, learning indicators, theoretical basis and learning videos related to practicum. Meanwhile, the second page contains the pre-test, list of tools and materials, MSDS, halogen gas synthesis practicum, halogen element oxidation power practicum, post-test, as well as pre-test and post-test scores. The initial virtual laboratory learning media product was validated by two material validators and three media validators. The results of the material validation test obtained an average r value of 0.8286 in the valid category. Meanwhile, the results of the media validation test obtained an average r value of 0.9125 in the valid category. The media that had been repaired was subjected to a feasibility test on 10 respondents, obtaining an average of 86.88% with the appropriate criteria. Thus, the virtual laboratory is declared valid and has a high suitability interpretation so that it can be used as a learning medium in practicals on the oxidation power of halogen elements.

Keywords: Virtual laboratory, oxidation power

