

## ABSTRAK

**Putri Hidayah, NIM 4183131023 (2022). Pengembangan Tes Diagnostik Berbasis Web pada Materi Larutan Elektrolit dan Nonelektrolit.**

Penelitian ini bertujuan untuk mengetahui: (1) analisis proses belajar mengajar pada mata pelajaran kimia, (2) hasil pengembangan tes diagnostik berbasis web pada materi larutan elektrolit dan nonelektrolit ditinjau dari penilaian kelayakan oleh validator ahli, (3) hasil penggunaan tes diagnostik berbasis web dalam mengukur miskonsepsi siswa pada setiap subkonsep materi larutan elektrolit dan nonelektrolit, (4) tanggapan responden terhadap tes diagnostik berbasis *web* pada materi larutan elektrolit dan nonelektrolit. Metode yang digunakan pada penelitian pengembangan ini adalah metode ADDIE yang terdiri dari 5 tahap perlakuan yaitu analisis (melakukan analisis kebutuhan), desain (merancang produk), pengembangan (melakukan uji kelayakan produk), implementasi (uji coba produk) dan evaluasi. Hasil penelitian menunjukkan bahwa (1) analisis proses belajar mengajar di SMAS PAB 4 Sampali telah menerapkan kurikulum 2013 dengan menggunakan metode ceramah, diskusi serta tanya jawab, namun belum menerapkan tes diagnostik untuk mengidentifikasi kelemahan siswa. (2) Persentase kelayakan materi 87,18% dengan kriteria sangat layak dan persentase kelayakan media 89,55% dengan kriteria sangat layak (3) Persentase miskonsepsi siswa pada subkonsep sifat larutan elektrolit dan nonelektrolit (30%), pengelompokkan larutan elektrolit berdasarkan daya hantar listrik (28%), penyebab larutan elektrolit dapat menghantarkan listrik (32%), pengelompokkan larutan elektrolit berdasarkan jenis ikatan kimia (56%), dan kekuatan elektrolit berdasarkan derajat ionisasi (48%). (4) Respon guru terhadap tes diagnostik berbasis web diperoleh rata-rata 94% dan rata-rata respon siswa 87,72%.

**Kata kunci:** Penelitian dan pengembangan, tes diagnostik, pemahaman konsep, larutan elektrolit dan nonelektrolit.



## ABSTRACT

### **Putri Hidayah, NIM 4183131023 (2022). Development of Web-Based Diagnostic Test in Electrolyte and Nonelectrolyte Solutions Topic.**

This study was aimed to find out: (1) the analysis of the teaching and learning process in chemistry subjects, (2) the results of developing web-based diagnostic tests on electrolyte and nonelectrolyte solutions in terms of feasibility assessments by expert validators, (3) the results of using web-based diagnostic tests, in measuring students' misconceptions on each subconcept of electrolyte and nonelectrolyte solutions, (4) respondents' responses to web-based diagnostic tests on electrolyte and nonelectrolyte solutions. The ADDIE method used in this experiment consist of several stages, analysis (performing needs analysis), design (designing products), development (conducting product feasibility tests), implementation (product trials) and evaluation. The results showed that (1) The analysis of the teaching and learning process at SMAS PAB 4 Sampali had implemented the 2013 curriculum using the lecture, discussion, question and answer methods, but had not implemented a diagnostic test to identify student weaknesses. (2) The percentage of material eligibility is 87,18% with very decent criteria and the percentage of media eligibility is 89,55% with very decent criteria (3) Percentage of student misconceptions on the subconcept of electrolyte and nonelectrolyte properties (30%), grouping electrolyte solutions based on conductivity electricity (28%), cause electrolyte solutions can conduct electricity (32%), grouping electrolyte solutions based on the type of chemical bond (56%), and electrolyte strength based on the degree of ionization (48%). (4) The teacher's response to the web-based diagnostic test obtained an average of 94% and the average student response 87,72%.

**Keywords:** Research and development, diagnostic test, understanding of concepts, electrolyte and nonelectrolyte solution.

