

**PENGEMBANGAN MONOGRAF “*AUGMENTED CHEMISTRY*
ALDEHIDA & KETON” BERILUSTRASI 3 DIMENSI (3D)
SEBAGAI SUPLEMEN PEMBELAJARAN KIMIA**

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ABSTRAK

Penelitian ini merupakan penelitian pengembangan dalam bidang pendidikan kimia yang bertujuan untuk menghasilkan dan mengetahui spesifikasi Monograf “*Augmented Chemistry* Aldehida & Keton” Berilustrasi 3 Dimensi (3D) Sebagai Suplemen Pembelajaran Kimia serta menentukan kualitas monograf tersebut berdasarkan penilaian lima guru kimia SMA.

Model pengembangan yang digunakan adalah model pengembangan ADDIE (*Analysis, Design, Development, Implementation, and Evaluation*). Produk awal ditinjau oleh dosen pembimbing, 1 orang ahli materi, 1 orang ahli media, dan 3 *peer reviewer*. Kualitas monograf dinilai oleh *reviewer*, yaitu lima guru kimia SMA di Daerah Istimewa Yogyakarta dengan menggunakan instrumen penelitian yang terdiri dari 5 aspek, yaitu aspek kelayakan isi/materi, penyajian, bahasa dan gambar, kegrafikaan, serta rekayasa perangkat lunak. Data yang diperoleh berupa data kualitatif yang kemudian dikonversi menjadi data kuantitatif untuk menentukan kualitas monograf tersebut.

Hasil penelitian ini adalah monograf dengan judul “*Augmented Chemistry* Aldehida & Keton” Berilustrasi 3 Dimensi Sebagai Suplemen Pembelajaran Kimia berbasis *Augmented Reality* yang dilengkapi dengan *marker*. Berdasarkan penilaian lima guru kimia SMA, buku pengayaan ini mempunyai kualitas sangat baik sehingga layak digunakan sebagai sumber belajar kimia.

Kata kunci: pengembangan, monograf, 3 dimensi, *augmented chemistry*, aldehida dan keton.

**DEVELOPMENT MONOGRAPH TITLED “AUGMENTED CHEMISTRY
ALDEHIDA & KETON” WITH 3 DIMENSION (3D) ILLUSTRATION
AS A SUPLEMENT BOOK ON CHEMISTRY LEARNING**

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ABSTRCT

This research is research and development (R&D) in Chemistry Education. The aims of this research were to develop the monograph with 3 dimensional (3D) illustration, to determine the specification of the monograph, and to determine the quality of the monograph. The monograph was completed by 3 dimensional (3D) illustration based on Augmented Reality and used as a suplemet book on chemistry learning. The quality was based on the reviews of senior high school chemistry teachers.

The development methode was ADDIE (Analysis, Design, Development, Implementation, and Evaluation). This monograph was reviewed and commented by supervisor, a chemistry content expert, a media expert, and 3 peer reviewers. The quality of the monograph was determined by reviewers which were five senior high school chemistry teachers in Yogyakarta Special Region by using an instrument which consisted of four aspects, i.e. subject, presentation, language and illustration, graphic, and software design. The result of the evaluation was qualitative data which were converted into quantitative data to determine the quality of the monograph.

The result of this research was the monograph titled “*Augmented Chemistry Aldehida & Keton*” with 3 Dimension (3D) Illustration As A Supplement Book on Chemistry Learning. Based on the review of the teachers, the book was concluded to have very good quality.

Key Words: development, monograph, 3 dimension, augmented chemistry, aldehydes and ketones.