

**THE ANALYSIS AND DEVELOPMENT OF CHEMISTRY LAB
MANUAL FOR GRADE XI OF SENIOR HIGH SCHOOL
ON LEARNING COLLOIDAL SYSTEM**

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ABSTRACT

The objective of this research was to be obtain the chemistry lab manual for students grade XI in even semester on learning colloidal system. This research was done in SMA N 1 Berastagi. This type of research, including development research. Meanwhile, the sample used in this study consisted of chemistry lab manual for grade XI of Senior High School publisher Duta Nusantara, 2 chemistry lecturers in State University of Medan, 3 chemistry teachers and 32 students for grade XI in SMA Negeri 1 Berastagi. Samples were taken by purposive sampling. The result of analysis chemistry lab manual in average 3.22 is quite valid, but need to be developed from various aspects. Teaching materials that have been developed validated by expert validator. Assessment is done based on a standard questionnaire BSNP (National Education Standards Agency). Based on research data obtained an average of 37 respondents that consists of 2 lecturers, 3 teachers and 32 students on the quality of teaching materials developed 3.67 belonging to the criteria of a valid and don't need revision means of the development of teaching materials is very feasible for use in learning. Elaboration of the overall average respondent to the quality of teaching materials developed are the average results of the assessment of lecturers in the amount of 3.62, the average results of the assessment of teachers is 3.67 and an average students assessment that is equal to 3.74. The influence of chemistry lab manual for grade XI of Senior High School has positive correlation in student's that is taught using of chemistry lab manual based on the student's outcomes the average of pretest is 30.8 and the average of posttest is 84. It's shown an understanding of student's during the teaching given colloidal system using of chemistry lab manual that have been developed is higher.

Keywords: *Development Research (D & R), Chemistry Lab Manual, Colloidal System, BSNP (National Education Standards Agency)*