

## Opportunity Integrated Assessment Facilitating Critical Thinking and Science Process Skills Measurement on Acid Base Matter

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**Abstract :** To recognize the importance of the development of critical thinking and science process skills, the instrument should give attention to the characteristics of chemistry. Therefore, constructing an accurate instrument for measuring those skills is important. However, the integrated instrument assessment is limited in number. The purpose of this study is to validate an integrated assessment instrument for measuring students' critical thinking and science process skills on acid base matter. The development model of the test instrument adapted McIntire model. The sample consisted of 392 second grade high school students in the academic year of 2015/2016 in Yogyakarta. Exploratory factor analysis (EFA) was conducted to explore construct validity, whereas content validity was substantiated by Aiken's formula. The result shows that the KMO test is 0.714 which indicates sufficient items for each factor and the Bartlett test is significant (a significance value of less than 0.05). Furthermore, content validity coefficient which is based on 8 expert judgments is obtained at 0.85. The findings support the integrated assessment instrument to measure critical thinking and science process skills on acid base matter.

**Keywords :** acid base matter, critical thinking skills, integrated assessment instrument, science process skills, validity

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