

## ABSTRACT

**Gracia Kristy Tarigan, IDN 4201131003 (2024). Analysis of Student Misconceptions Using Three-Tier Multiple-Choice Diagnostic Tests on Reaction Rate Material in SMA Negeri 2 Percut Sei Tuan.**

This descriptive research aims to analyze the level of students' misconceptions on the reaction rate material and analyzing misconceptions on each concept in the reaction rate material. The research method used is descriptive research with a quantitative approach. The sample in this research are 30 students of Grade XI students of SMAN 2 Percut Sei Tuan. The instrument used in this research is three-tier multiple-choice diagnostic test, with total 20 questions. The results showed that the average of students' misconception of SMAN 2 Percut Sei Tuan who experience misconception is 61,6%. Students' misconception occurs in each concepts of reaction rate material. Percentages of students' misconceptions on reaction rate and reaction rate expressions have percentage 54.25%, in concept reaction order have percentage 62.86%, in concept factors affecting reaction rate have percentage 60.57%, in concept collision theory have percentage 73.70%, and in concept reaction rate equation have percentage 52.57%.

**Keywords:** Misconception, Three-Tier Multiple-Choice Diagnostic Test, Reaction Rate