

## CHAPTER V

### CONCLUSION AND SUGGESTION

#### 5.1. Conclusion

Based on the result of research that obtained from the result of data analysis, it can be stated some conclusion as follows :

1. The arranging of innovative chemistry learning material Reaction Rate has successfully designed suited to K13 curriculum that used at senior high school. It can be used as a learning material on teaching reaction rate grade XI senior high school.
2. The standard and good innovative chemistry learning material reaction rate prepared to proceed teaching and learning process optimum. It was get the positive response from expert chemistry lecturers and students as a standardizer with the total average of validation score was **3.57**.
3. The development of learning material on the topic of reaction rate is based on the suitability description material on the standard and basic competence of K13 syllabus. The developed standard chemistry learning material reaction rate consists of 4 subtopics, they are the concepts of reaction rate, reaction order and rate equation, the collision theory and activation energy and factors affecting the reaction rate. And there are integration of the following relevant laboratory experiment, contextual application, the illustration, pictures and graph to support the reaction rate materials, problems and examples, solving problems, sets of evaluation and key answer and the address of relevant website for further study. The innovation on learning material is downloaded video and *hyperlink* video with the appropriate website address. The integration of active learning in learning material reaction rate such as web-based learning, a reaction to video, collaborative learning group, laboratory experiences and classroom discussion. The integration of multimedia in learning material reaction rate such as, text and

illustration (pictures), animations, videos and e-book for e-learning.

4. The standard and good innovative chemistry learning material absolutely have good criteria and suitable with Indonesia Education National Standard (*Badan Standar Nasional Pendidikan / BSNP*), based on content, extension, depth, design and language.

## 5.2. Suggestion

Based on the conclusion above, there are some suggestion that have to be stated in order to make teaching and learning process in chemistry become effective and efficient as follows:

1. It is suggested that the chemistry teacher should give the standard and good innovative chemistry learning material based on the K13 curriculum as main learning media for student in senior high school especially learning material reaction rate according to Indonesia Education National Standard (*Badan Standar Nasional Pendidikan / BSNP*) and it is suggested to teacher for developing and providing the standard and good innovative learning material to be used in the teaching and learning process especially for reaction rate subject in senior high school.
2. It is suggested to next researchers could improve the better innovative chemistry learning material based on K13 curriculum and develop the e-book good in content, depth in the material, fill with new knowledge based on the development of technology, good structure, design and language so the students are easy and simple to understand.