

THE TEACHING BASED ON THE TESTING OF HYPOTHESIS OF THE LINKAGE OF THE CHANGE OF COLOR WITH PHYSICAL/CHEMICAL CHANGES

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Abstract

The linkage between change of color with the physical and chemical change is challenge in science education. It is mostly used the hypothesis expressing as “If its color changes when a substance is heated, chemical change in the substance occurs”. But, there are many samples refuted this hypothesis in practice. In this study, two experimental models have been planned to enlighten this situation. These experimental models base to the qualitative analysis and the sublimation of iodine, the qualitative analysis of the product which is obtained with the burning of magnesium on media with oxygen. In practice, they must be successively demonstrated to test hypotheses proposed after concepts cited are taught with meaningful learning approach. They are evidence of hypothesis suggested as “If its color changes when a substance is heated, sometimes physical change or sometimes both physical and chemical change in the substance occurs”. In addition, they are carried out in one lesson time with simple instruments and the cheap, easy available chemical substances that may not affect to the health of human. They can be contributed to the meaningful learning of students in middle school in this context of the linkage of the change of color with physical and chemical changes.

Key Words: Science education, demonstration, physical change, chemical change, color change.