

Fig. 8. The effect of sucrose concentration on the folding test of surimi

Based on Figure 8, it can be seen that as the concentration of sucrose increased, the folding test values tended to decrease, even though the values were not significantly different. This is presumably because the sucrose changes from solid to liquid in the produced surimi. The high of sucrose addition causes surimi texture getting soft, so it is difficult to be folded. As a result, it decreased the folding test value. Reppond et al [11] stated that the addition of sucrose in certain concentrations can cause surimi easily broken and cracked during the folding test.

#### E. Sensory Evaluation

The concentration of sucrose had a very significant effect ( $P \leq 0.01$ ) on the color of surimi sensory test (Figure 9), whereas washing cycle, and the interaction between the sucrose concentration and washing cycle had no significant effect ( $P > 0.05$ ) on the color of surimi sensory test.

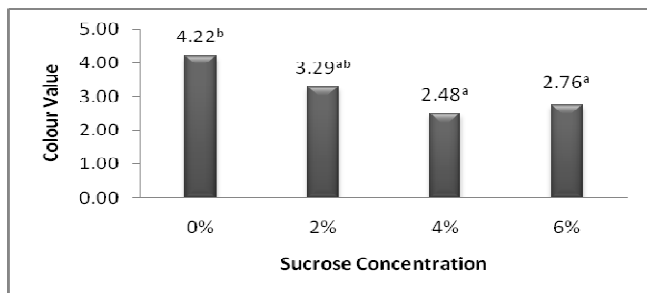


Fig. 9. The effect of sucrose concentration on color of surimi sensory test

Figure 9 showed that surimi without sucrose addition produce a bright color of surimi (4.22). Overall, the increase of sucrose concentration cause a darker surimi. It could be caused by the occurrence of browning reaction. Kim et al, [4] reported the same results, as the concentration of sucrose increases, the color of produced surimi become darker.

The result of the texture sensory analysis showed that only the interaction between the concentration of sucrose and washing cycle affected significantly ( $P \leq 0.05$ ) (Figure 10). Based on Figure 10, it can be seen that the surimi with no sucrose addition and one washing cycle and the surimi with 4% of sucrose and two washing cycles exhibited higher texture sensory values compare to other treatments. The addition of sucrose and washing cycle more than once can affect the texture of surimi.

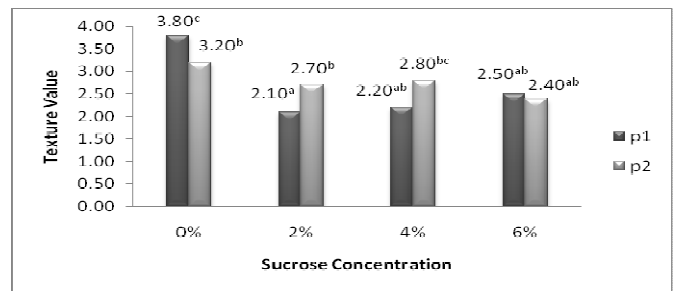


Fig. 10. The interaction effect of sucrose concentration and washing cycle on the surimi texture sensory test (\*p1 = one washing cycles; p2 = two washing cycles)

#### IV. CONCLUSIONS

The results showed that the concentration of sucrose gave highly significant effects on protein contents, color and texture of surimi sensory tests, and resulted in significant effect on yield and fold test of the surimi. The frequency of washing gave very significant effects on yield, moisture, ash, and fat contents, as well as significantly affected the pH value. The interaction between sucrose concentration and frequency of washing produced significant effect on protein content and texture of surimi sensory test.

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