THERMAL GRAVIMETRY ANALYSIS FOR BLEND FILM OF GELATINE RAYFISH SKIN (*Himanturra gerrardi*) AND CHITOSAN WINDU SHRIMP SHELLS (*Peneaus monodon*)

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Abstract

Water vaporization and thermal degradation of material like blend film of fish gelatine and chitosan shrimp shells, can be analyzed using thermal gravimetric. Films were analyzed by thermal gravimetric with blend concentration variations, ie GI 3% - Ch 3%, GI 3% - Ch 4%, and GI 4% - Ch 3%. The blend film added with additives such as sorbitol and glycerol as a plasticizer. The start stages of water evaporation at GI 3%-Ch 3%, GI 3%-Ch 4%, and GI 4%-Ch 3% sequentially which occurs at a temperature of 32,92\(^{0}\)C; 32,27\(^{0}\)C; dan 29,98\(^{0}\)C, respectively. While the first stage of thermal degradation in the GI 3%-Ch 3%, GI 3%-Ch 4%, and GI 4%-Ch 3% sequentially occur at 129,04\(^{0}\)C; 138,82\(^{0}\)C; and 128,98\(^{0}\)C. The next step is second degradation of GI 3%-Ch 3%, GI 3%-Ch 4%, and GI 4%-Ch 3% . Degradation occurred at 129,04\(^{0}\)C; 138,82\(^{0}\)C; and 128,98\(^{0}\)C. Blend film of GI 3%-Ch 4% have degradation point higher than blend film of GI 3%-Ch 3% dan GI 4%-Ch 3%.

Keywords : Blend film of gelatine-chitosan, thermal gravimetric analysis, water vaporization, thermal degradation.