The purpose of the research is to determine the effect of the concentration of filler material and concentration sodium tripolyphosphate to the characteristics of white oyster mushrooms sausage. The research method consists of preliminary research and primary research. The preliminary research conducted to determine the type of filler material to be used in the main research. The primary research is to determine of the varying concentration of filler material and sodium tripolyphosphate concentration.

The Experimental design that used in this research is a Randomized Block Design with factorial pattern of 3x3 in followed by Duncan test. The first factor of the primary research is the concentration of filler material (a) that is 8.00% (a1), 8.25% (a2), 8.50% (a3) and 8.75% (a4). The second factor of the primary research is the concentration of sodium tripolyphosphate (b) that is 12% (b1), 13% (b2), 14% (b3), and 15% (b4). Observation parameter conducted to physical analysis covering hardness level by using penetrometer appliance. Organoleptic test that covering color, flavor, texture, and taste. and also chemical analysis of selected samples covering protein rate, fiber rate, and ash content rate.

The results of research showed that the chosen sample a3b1 treatment with (filler material concentration (a) 15%, and sodium tripolyphosphate (b) 0.24%). has a hardness level of 7.80 mm / sec, protein content of 4.9%, ash content of 0.95% and fiber content of 6.86%. based on organoleptics test show that the value of a favorite on the attributes of color, flavor, taste and texture are 4.62, 2.30, 4.65, 4.44 respectively.