The use of liquid smoke in the processing of smoked fish is an alternative to improve the quality value and reduce air pollution caused by the traditional smoking process. This study aims to determine the effect of giving liquid smoke on the chemical characteristics of smoked fish and to find out the best concentration of liquid smoke on the level of acceptance of researchers be based on organoleptic tests. This study used a completely randomized design (CRD) with four treatment concentrations of liquid smoke immersion namely: 0%, 2%,4%, and 6% each treatment was repeated 3 times. The results showed that the concentration of liquid smoke had an effect (p<0.05) on chemical characteristics (water and fat content), but had no effect (p>0.05) on protein and ash content. Hedonic organoleptic test results and hedonic quality showed that the concentration of 6% liquid smoke was the best treatment, with specifications having a delicious and savory taste with a solid texture and shiny brown color. The value of appearance (7,10;7.33), smell (7.50;7.53), taste (7.57;8.53), texture (6.47;7.33), mold and slime (9 ,0).