ABSTRACT

One of the major pests that favor moist places and food is the housefly because flies seek food and moist places as their food source and place of residence. As a result, fly damage to meat in the market causes significant economic losses. By 2023, the annual loss due to fly contamination of meat is estimated at 2 billion rupiah. In addition, organophosphate chemical pesticides pollute and accumulate in the environment. Jengkol (Archidendron pauciflorum) can be used as an alternative pesticide to control flies because it contains alkaloid, flavonoid, tannin and terpenoid compounds. This study aims to make an anti-fly formula from jengkol shell extract with 4 stages, namely grinding, extraction, phytochemical testing and fly testing. For the grinding and extraction stage of 200 grams of dried jengkol shells, 12 ml of ethanol phase extract was obtained with a yield of 5.925%. In addition, phytochemical tests showed the presence of bioactive content that acts as an anti-fly, namely alkaloids, flavonoids, tannins, saponins, and terpenoids. The anti-fly test showed an proportional increase (R^2 = 0.993) in the percentage of fly mortality from extract concentrations of 75 to 400 ppm with linear regression equation % Lethality = 0.2491 [concentration] + 3.407. While the LC_{50} was detected at a concentration of 275.3025 for 3 dataset. Hence it is concluded that fly mortality from jengkol shells is regulated by a number of bioactives where mortality is proportional to concentration.

Keywords : Jengkol, bioactive, pesticide