# DEVELOPMENT OF pH SENSORS BASED ON EXTRACT OF RUELLIA TUBEROSA FLOWER ON CELULOSE ACETATE MEMBRANE FOR MEAT FRESHNESS ANALYZE

## *ABSTRACT*

*Food is the primary requirement for humansd, the one kind of food it takes humans need are meat, in choosing a quality meat each individual has different capabilities, one of the factors that affect the level of freshness meat is the pH values, use a pH meter to find out the value of the pH meter will damage the meat samples of meat, one of the potential to know the pH of the meat is to use optical sensors, for example, is a litmus paper, however the use of paper However the use of litmus paper has some drawbacks that is quickly broken and dye of substances will contaminate the samples, then do development with the optical sensor based on organic material IE ruellia tuberosa flower is not harmful to the sample food, contain anthocyanin compounds that can be used as acid-base indicator, then extract this immobilize into the membranes of cellulose acetate so that for easly usage, the test results against this sensor meat samples give good results seen from the results of testing of aqueous buffer solution pH and the pH of the meat that shows the result of a change of the same color.*

***Keywords:*** *food, meat, optical sensors, pH, ruellia tuberosa, celulose acetate membrane.*