

ABSTRACT

The research aimed to determine the best combination of alginate and piper betle essential oil to inhibit the growth of microbas and maintain the quality of Java-apple Dalhari variety. The experiment was conducted in Postharvest Laboratory University of Muhammadiyah Yogyakarta from March to April 2017. The experiment used factorial experimental which arranged in Completely Randomized Design (CRD). The first factor was alginate concentration consist of three levels which were 2%; 2.5%; and 3%. The second factor was piper betle essential oil consist of three levels which were 0%; 0.1%; and 0.2%. The result showed that the treatment of 2.5% alginate and 0.1% piper betle essential oil was the most effective to maintain quality of Java-apple Dalhari variety. The addition of piper betle essential oil did not able to inhibit microbial growth. Alginate and piper betle essential oil edible coating combination was able to maintain the quality of Java-apple Dalhari variety up to 9 days.

Keywords : Java-apple Dalhari, Edible Coating, Alginate, Piper Betle Essential Oil