

## **ABSTRACT**

*CMC edible coating combined with essential oils of lemongrass and cinnamon is known to inhibit browning in fresh cut fruit. This research has been carried out in Laboratory of Postharvest Technology Faculty of Agriculture Universitas Muhammadiyah Yogyakarta in June to July 2018. This study aims to examine the physiological effects of using CMC edible coating enriched with lemongrass essential oil and cinnamon in fresh cut Manalagi apple against brown discoloration. The study was carried out with factorial experimental designs arranged in Completely Randomized Design (CRD) with 3 replications. The experiment tested consisted of 2 factors. The first factor was CMC 0%, 1% and CMC1.5% and the second factor was essential oil 0%, citronella essential oil 0.4% and cinnamon essential oil 0.7%. The results showed the administration of CMC1.5% edible coating enriched with 0.7% cinnamon essential oil was treated with the best ability to inhibit chemical browning by inhibiting the activity of the enzyme polyphenol oxidase (PPO) and peroxidase (POX). The administration of edible coating CMC 1% without essential oils in visual able can inhibit the browning on an apparition of fresh-cut Manalagi apple.*

*Key Word : CMC Edible coating, lemongrass essential oil, cinnamon essential oil, browning*