EFFECT OF REDUCING AND ACIDIFYING ANTI-BROWNING AGENTS ON FRESH CUT GUAVA

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TABLE OF CONTENTS

ABSTRACT

EFFECT OF REDUCING AND ACIDIFYING ANTI-BROWNING AGENTS ON FRESH CUT GUAVA

Fresh cut products can be defined as any kinds of fruits or vegetables that have been processing to the end product that is ready to be eaten. The market for fresh cut products has grown rapidly due to the freshness and convenience. However, fresh cut products would undergo enzymatic browning as a result from wounding. The objective of this study is to determine the effectiveness of reducing and acidifying anti-browning agents on fresh cut guava by delaying enzymatic browning. The fresh cut guava was treated by dipping into anti-browning agents with 1.8 % concentrations (w/v) for 8 minutes. The treated fresh cut guava were then transferred into polyethylene bags and stored in the chiller along 12 days at 4ºC. The fresh cut guava also dipped into distilled water as control. Polyphenol oxidase (PPO) activities in terms of percentage of inhibition and total phenolic contents (TPC) were evaluated every 4 days interval. The results obtained showed that citric acid treatment was more effectively inhibited PPO activity on fresh cut guava compared to ascorbic acid treatment during day 4, 8, and 12. This is because, citric acid treatment show the highest percentage inhibition of PPO up to 76.92% on day 4, 92.22% on day 8 and 89.60% on day 12. Moreover, TPC showed decrease in contents from day 4 to day 12 for all treatments while sharp reduction of phenolic contents obtained from control fresh cut guava from day 4 to day 8 and it may due to the reaction of phenol to PPO enzymes. It can be concluded that, the higher percentage of PPO inhibition, the lower PPO activity and the higher the total phenols.