PRESERVATION OF HARVESTED STRAWBERRY FRUITS *(Fragaria ananassa)* BY EDIBLE OIL COATING MIXED WITH ALOE VERA GEL *(Aloe vera (L.) Burm.f.)* AT ROOM TEMPERATURE

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ABSTRACT

Strawberries are very unique, Rich in vitamin C, antioxidants and fiber, they offer significant health benefits and are a low-calorie treat. They are grown all over the world, have great economic significance, and are symbolic of love and purity in culture. Their adaptability in the kitchen and use of sustainable farming methods increase their value internationally. Therefore, this study is aimed to determine how aloe vera gel and edible oil coating work together to increase the shelf life of harvested strawberry fruit that is kept at room temperature. Two types of oil (Coconut oil and Corn oil) were selected for this study and the experiments were done by changing the Aloe Vera addition as 5%, 10% and 15%, where not coated strawberries were kept outside as controlled sample and maintained the room temperature (32^0C) throughout the experiments. Cumulative Weight Loss (CWL), pH, Brix value and Hardness were tested as the performance parameters for every 1st, 3rd, 5th and 7th day, and also sensory evaluation of coated strawberries carried out by using 7-point hedonic scale.

On the 7th day the weight loss is high for controlled sample (0.35g) compared to all the coated samples, in which 10% addition of Aloe Vera to coconut oil (0.26g) and 5% addition of Aloe Vera to corn oil (0.16g) is resulted in considerable weight loss compared to other coated samples. An abrupt increase in the pH is observed for the coated strawberries and negatively correlated (-0.74) with number of days, ranged between 3.0 - 5.0 for almost all the coated strawberries. Even though it is ideal to eat, flavor profile may vary. Strawberries coated with 5% of Aloe Vera with coconut oil stand significant with high brix value compared with other coated samples, which is preferable. It was noted that the hardness of the samples negatively (-0.86) correlated with the brix value, therefore identifying an optimum is inevitable. The strawberries coated with corn oil resulted a high hardness compared to coconut oil coated samples, where 5% and 15% Aloe Vera added coconut oil coated strawberries are resulted approximately same hardness as the controlled sample. Overall Coated using coconut oil is more preferable in which addition of 5% Aloe Vera is appropriate in terms of all the quality.

Key words: Aloe Vera, Antioxidants, Coconut Oil, Corn Oil, Economic Significance, Room temperature, Sensory Evaluation, Strawberries

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