PHYSICOCHEMICAL AND TEXTURAL PROPERTIES OF STRAWBERRY (*Fragaria x ananassa*) COVERED WITH EDIBLE WHEY PROTEIN ISOLATES

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**ABSTRACT**

The use of edible coverings (EC) constitutes a conservation alternative to enhance the lifetime of different foods, specially fruits and vegetables. The aim of this study was to assess the physicochemical and textural properties of strawberry (*Fragaria x ananassa*) coated with edible whey protein isolate (WPI) and its effect on extending lifetime. The methodology used was based on the classification of strawberry with respect to their maturity, size and color uniformity. The EC was developed with 10% (WPI), 15% glycerol and deionized water, being applied to two treatments: T1 (semi-mature strawberry) and T2 (mature strawberry), strawberry without EC were used like control. All strawberries were stored in refrigeration (3±1°C) during 7, 14 and 21 days, in accordance with the fruit’s respiratory rate. pH, Humidity and water activity (Aw) were assess, texture profile analyses (TPA) were made with the TA-XT2i texturemeter, while color analyses were made with the sphere spectrophotometer X-RITE SP60. With p<0.05% it was found that the EC didn’t affect the physicochemical parameters: pH, Humidity and Aw. Regarding the TPA and color analyses. T2 and control didn’t show significant differences giving values of 414,5N and 399,55N respectively for firmness and 28, 02 and 30, 21 for color on strawberry surfaces. The T2 showed the best result with respect to maintain the physicochemical and textural properties in strawberry and slowing its growth of fungi. The WPI covering enhanced the strawberries lifetime in 10 days, while keeping the firmness, without making perceptible changes in luminosity, compared to strawberry used as control treatment.

**Key Words:** Strawberry, *Fragaria x ananassa*, Whey Protein isolate.