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# SEMINARIO DE DIRECCIÓN

## “EFFECT OF EDIBLE NATURAL POLYMER COATING ON STRAWBERRY SLICES DRIED BY CONVECTION”

Anabel López Ortiz es Investigadora de tiempo completo con nombramiento de Catedrática CONACyT asignada al Instituto de Energías Renovables de la UNAM. Es miembro del Sistema Nacional de Investigadores. Es profesor asociado en el CIIDIR OAXACA. Completó sus estudios profesionales como Ingeniero Químico en el Instituto Tecnológico de Oaxaca y como Doctora en Ciencias en Conservación y Aprovechamiento de Recursos Naturales en el Instituto Politécnico Nacional-CIIDIR-OAXACA. Trabaja en colaboración con los grupos de investigación: Bioprocess Engineering Research Group de la Univesidad Canadiense Dalhousie, grupo de investigación de Unilever en Holanda, Tecnologías Agroalimentarias del CIIDIR-OAXACA, Laboratorio de Ingeniería Química-UNAM y grupo de Secado Solar-IER-UNAM. Sus publicaciones incluyen 4 artículos en revistas indexadas, 1 capítulo de libro, 9 memorias de congresos Internacionales y 16 memorias de congreso nacionales. Funge como revisor en revistas como Journal of Food Properties, Journal of Food Measurement and Characterization, Journal of Food Process Engineering, and Scielo.

**Abstract:** It has been reported protein and glycerol films can improve the color stability of strawberries. *Opuntia ficus indica* mucilage is a neutral polysaccharide that contains arabinose, rhamnose, galactose and xylose. This particular composition can be used as coating film for protection of the strawberry color. Nevertheless, the drying kinetics and mass transfer mechanism can be affected by the coating. Therefore experimental design was performed. Strawberry slices ( $2 \text{ y } 4 \pm 1 \text{ mm}$  of thickness) and tree drying temperatures ( $40, 50 \text{ y } 60^\circ\text{C}$ ) were tested. The slices were coating using *opuntia ficus indica* mucilage. The mucilage was obtained by maceration with water (1:1 ratio) at  $80^\circ\text{C}$  during 2 minutes. Moisture content and color ( $L^*, a^*, b^*$ ) was measured during drying process. Characteristic curve of drying, chroma,  $\Delta E$ , Hue were calculated. Drying kinetics was similar to previous studies founded in the literature. It was found an evaporative and a diffusive mechanism of mass transfer. Also was found that drying velocity depends of the thickness and the temperature of drying. Color deterioration was correlated to moisture content, and thickness, being observed that is major in uncoated samples. Edible natural coating doesn't affect the drying time.

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