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## 9. BIBLIOGRAFÍA

Almenar, E.M.R. 2005. Envasado activo de fresas silvestres. Tesis Doctoral. Universidad de Valencia, España. Febrero 25, 2009.  
[http://www.tesisenxarxa.net/TESIS\\_UV/AVAILABLE/TDX-0628106-130502//almenar.pdf](http://www.tesisenxarxa.net/TESIS_UV/AVAILABLE/TDX-0628106-130502//almenar.pdf)

Alzamora, S.M., Tapia, M.S. y López-Malo, A. 2000. Minimally Processed Fruits and Vegetables. Fundamental Aspects and Applications. Aspen Publishers, Inc. E.U.A.

AOAC. 1984. "Official Methods of Analysis". Ed. 14<sup>th</sup>. Association of Official Analytical Chemists. Washington, D.C. E.U.A.

Arizmendi, D. 2004. Optimización de dos compuestos plastificantes (glicerol y polietilenglicol) en la elaboración de una película comestible obtenida a partir de mucílago de nopal de la especie *Opuntia tomentosa Salm-Dyck*. Premio Nacional en Ciencia y Tecnología de los Alimentos. México.

ASTM. 1989. Standard test methods for water vapor transmission of materials. American Society for Testing Materials E 96-87.

Baldwin, E.A., Nisperos-Carriedo, O.Y. y Baker, R.A. 1995. Use of edible coatings to preserve quality of lightly (and slightly) processed products. *Critical Reviews in Food Science and Nutrition* 35 (6):509-524.

Bhaskara Reddy, M.V., Belkacemi, K., Corcuff, R., Castaigne, F. y Arul, J. 2000. Effect of pre-harvest chitosan sprays on post-harvest infection by *Botrytis cinerea* and quality of strawberry fruit. *Postharvest Biology and Technology* 20: 39-51.

Browne, K.M., Geeson, J.D. y Dennis, C. 1984. The effects of harvest date and CO<sub>2</sub>-enriched storage atmospheres on the storage and shelf-life of strawberries. *J. Hortic. Sci.* 59: 197-204.

Butler B.L., Vergano P.J., Testin R.F. y Wiles J.L. 1996. Mechanical and barrier properties of edible chitosan films as affected by composition and storage. *Journal of Food Science* 61(5): 953-955.

Cai, W., Gu, X. y Tang, J. 2008. Extraction, purification, and characterization of the polysaccharides from *Opuntia milpa alta*. *Carbohydrate Polymers* 71: 403-410.

Caner, C., Vergano, P.J. y Wiles, J.L. 1998. Chitosan film mechanical and permeation properties as affected by acid, plasticizer, and storage. *J. Food Sci.* 63:1049-1053.

Cárdenas, A., Goycoolea, F. M. e Higuera-Ciapara, I. 1997. Rheology and aggregation of cactus (*Opuntia ficus indica*) mucilage in solution. *Journal of the Professional Association for Cactus Development* 2: 152-159.

Cha, D.S. y Chinnan, M.S. 2004. Biopolymer-based antimicrobial packaging: A review. *Critical Reviews in Food Science and Nutrition* 44: 223 – 237.

---

---

Chen, M-CH., Horng-Chin, G.Y. y Chiang, B-H. 1996. Microbial and physicochemical properties of methylcellulose and chitosan films containing a preservative. *Journal of Food Processing and Preservation* 20: 379-390.

Chien, P.J., Sheu, F. y Yang, F.H. 2007. Effects of edible chitosan coating on quality and shelf life of sliced mango fruit. *Journal of Food Engineering* 78: 225-229.

Del-Valle, V., Hernández-Muñoz, P., Guarda, A. y Galotto., M.J. 2005. Development of a cactus-mucilage coating (*Opuntia ficus indica*) and its application to extend strawberry (*Fragaria ananassa*) shelf-life. *Food Chemistry* 91: 751-756.

El Ghaouth, A., Azul, J., Ponnampalam, R. y Boulet, M. 1991. Chitosan Coating Effect on Storability and Quality of Fresh Strawberries. *Journal of Food Science* 56: 1618-1620.

Forno, E., Penci, M. y Polesello, A. 1994. A preliminary characterization of some pectins from quince fruit (*Cydonia oblonga Mill*) and prickly pear (*Opuntia ficus indica*) peel. *Carbohydrate Polymers* 23: 231-234.

Garcia, M.A., Martino, M.N. y Zaritzky, N.E. 1998. Plasticized starch-based coatings to improve strawberry (*Fragaria x ananassa*) quality and stability. *J. Agric. Food Chem.* 46: 3758-3767.

Gontard, N., Duchez, C., Cuq, J.L. y Guilbert, S. 1994. Edible composite films of wheat gluten and lipids: water vapour permeability and other physical properties. *International Journal of Food Science and Technology* 29: 39-50.

Goycoolea, F. y Cárdenas, A. 2004. Pectins from *Opuntia spp.*: short review. *Journal of the Professional Association for Cactus Development* 5, 17-29.

Granados, D. y Castañeda, A.D. 1996. El nopal. Editorial Trillas, México Pág. 227.

Guzmán V.G. 2003. Efecto del tipo de agente plastificante en películas de quitosano. Tesis de licenciatura. Fundación Universidad de las Américas Puebla. México.

Han, C., Zhao, Y., Leonard, S.W. y Traber, M.G. 2004. Edible coatings to improve storability and enhance nutritional value of fresh and frozen strawberries (*Fragaria x ananassa*) and raspberries (*Rubus ideaus*). *Postharvest Biology and Technology* 33: 67-78.

Havard, C. y Harmony, M.X. 1869. Improved process of preserving meat, fowls, fish, etc. U.S. Patent No. 90944.

Hernández-Muñoz, P., Almenar, E., Ocio, M.J. y Gavara, R. 2006. Effect of calcium dips and chitosan coatings on postharvest life of strawberries (*Fragaria ananassa*). *Postharvest Biology and Technology* 39: 247-253.

Holcroft, D.M. y Kader A.A.. 1999. Carbon dioxide-induced changes in color and anthocyanins synthesis of stored strawberry fruits. *HortScience* 34: 1244-1248.

- Jiang, Y. y Li, Y. 2001. Effects of chitosan coating on postharvest life and quality of longan fruit. *Food Chem.* 73: 139-143.
- Ke, D., Zhou, L. y Kader, A. A. 1994. Mode of oxygen and carbon dioxide action on strawberry ester biosynthesis. *J. Am. Soc. Hortic. Sci.* 119: 971-975.
- Kester, J. J. y Fennema, O.R. 1986. Edible Films and Coatings: A Review. *Food Technology*. Diciembre: 47-59.
- King, A. D. Jr. y Bolin, H.R. 1989. Physiological and Microbiological Storage Stability of Minimally Processed Fruits and Vegetable. *Food Technology* Febrero: 132-135, 139.
- Krochta, J.M., Baldwin, E.A. y Nisperos-Carriedo, M.O. 1994. Edible Coatings and Films to Improve Food Quality. Technomic Publishing Co., Lancaster, PA, E.U.A.
- Labuza, T. P. y Breene, W.M. 1988. Applications of "Active Packaging" for Improvement of Shelf-Life and Nutricional Quality of Fresh and Extended Shelf-Life Foods". *Journal of Food Processing and Preservation* 13: 1-69.
- Labuza, T. P. y Contreras-Medellín, R. 1981. Prediction of Moisture Protection requirements for food. *Cereal Foods World* 26: 335.
- Lerici, C. R., Pinnaaia, G., Dalla Rosa, M., y Bartolucci, L. 1985. Osmotic dehydration of fruit: influence of osmotic agents on drying behavior and product quality. *J. Food Sci.* 50: 1217-1219.
- Li, C. y Kader, A. A. 1989. Residual effects of controlled atmospheres on post harvest physiology and quality of strawberries. *J. Am. Soc. Hortic. Sci.* 114: 629-634.
- López, Q. M.Y. 2007. Efecto de películas de quitosano hidrofóbicas en la vida de anque de fresas (*Fragaria ananassa*) deshidratadas osmóticamente. Tesis de Maestría. Fundación Universidad de las Américas Puebla. México.
- Majdoub, H., Roudesli, S., Picton, L., Le Cerf D., Muller, G. y Grisel, M. 2001. Prickly pear nopals pectin from *Opuntia ficus indica* physico-chemical study in dilute and semi-dilute solutions. *Carbohydrate Polymers* 46, 69-79.
- Mathlouthi, M.. 1986. Food packaging and preservation theory and practice. Editorial Elsevier Applied Science Publisher. E.U.A.
- Matsuhira, B., Lillo, L.E., Sáenz, C., Urzúa, C.C. y Zárate O. 2006. Chemical characterization of the mucilage from fruits of *Opuntia ficus indica*. *Carbohydrate Polymers* 63: 263-267.
- McGuire, R. 1992. Reporting of objective color measurement. *Horti. Sci.* 67: 1254-1255.
- Medina-Torres, L., Brito-De La Fuente, E., Torrestiana-Sanchez, B. y Katthain, R. 2000. Rheological properties of the mucilage gum (*Opuntia ficus indica*). *Food Hydrocolloids* 14: 417-424.

---

---

Mitchell, F.G., Mitcham, E., Thompson, J.E. y Welch, N. 1996. Handling strawberries for fresh market. *Agr. Nat. Resources Special Publ.* 2442: 14. Editado por Ag. Info. And Publications, University of California Davis, CA, E.U.A. Traducido por Clara Pelayo Depto. Biotecnología. CBS.Universidad Autónoma Metropolitana-Iztapalapa. Consejo Nacional de Ciencia y Tecnología. México, D.F.

Morris, A. y Parker, A.J. 1895. Preservative coatings for foods, U.S. Patent No. 556, 471.

Nelson, K.L. y Fennema, O. 1991. Methylcellulose films to prevent migration in confectionary products. *J. Food Sci.* 56: 504-9.

Nobel, P.S.. 2002. *Cacti. Biology and Uses.* University of California Press, Berkeley y Los Angeles, CA. E.U.A. Págs. 23-40.

Nobel, S.P., Cavalier, J. y Andrade, J.L. 1992. Mucilage in cacti its apoplastic capacitance associated solutes and influence on tissue water relation. *Journal of Experimental Botany* 43:250,641-642.

Norma Oficial Mexicana NOM-093-SSA1-1994, Bienes y Servicios. Prácticas de higiene y sanidad en la preparación de alimentos que se ofrecen en establecimientos fijos. Estados Unidos Mexicanos.- Secretaría de Salud. Febrero 13, 2009. <http://www.salud.gob.mx/unidades/cdi/nom/093ssa14.html>

Park, H.J., Bunn, J.M., Weller, C.L., Vergano, P.J. y Testin, R.F. 1994. Water Vapor Permeability and Mechanical Properties of Grain Protein-based Films as Affected by Mixtures of Glycol and Glycerin Plasticizers. *American Society of Agricultural Engineers* 37(4): 1281-1285.

Park, H.J. y Chinnan, M.S. 1994. Gas and Vapor Barrier Properties of Edible Films from Protein and Cellulosic Materials. *Journal of Food Engineering* 25: 497-507.

Pimienta, E. 1990. *El Nopal Tunero.* Universidad de Guadalajara, México. Pág. 246.

Pelayo, C., Ebeler, S.E. y Kader, A.A. 2003. Postharvest life and flavor quality of three strawberry cultivars kept at 5°C in air or air+20 kPa CO<sub>2</sub>. *Postharvest Biol. Technol.* 27, 171-183.

Platenius, H. 1939. Wax emulsion for vegetables. Bulletin 723, Cornell University. Agricultural experiment station, Ithaca, N.Y. E.U.A.

Ribeiro, C., Vicente, A.A., Teixeira, J.A. y Miranda, C. 2007. Optimization of edible coating composition to retard strawberry fruit senescence. *Postharvest Biology and Technology* 44: 63-70.

Rodríguez-Félix, A. y Cantwell, M. 1988. Developmental changes in composition and quality of prickly pear cactus cladodes (nopalitos). *Plant Foods Hum. Nutr.* 38: 83-93.

---

---

Romanazzi, G., Nigro, F., Ippolito, A., Venere, D.D. y Salerno, M. 2002. Effects of Pre- and Postharvest chitosan treatments to control storage grey mold of table grapes. *J. Food Sci.* 67: 1862-1867.

Rotzinger C. 2002. Evaluación de las propiedades de películas de quitosano y su uso como barreras a la transferencia de humedad en pizzas. Tesis de licenciatura. Fundación Universidad de las Américas Puebla. México.

Rudrapatnam, N.T. y Farooqahmed, S.K. 2003. Chitin – The Undisputed Biomolecule of Great Potential. *Critical Reviews in Food Science and Nutrition* 43 (1): 61-87.

Saag, L., Sanderson, G., Moyna, P. Y Ramos, G. 1975. Cactaceae Mucilage Composition. *Journal of the Science of Food and Agriculture* 26, 993-1000.

Sáenz, C. 2006. Utilización Agroindustrial del Nopal. Boletín de Servicios Agrícolas de la FAO 162. ISSN 1020-4334. Servicio de Tecnologías de Ingeniería Agrícola y Alimentaria (AGST) con la colaboración de la Red Internacional de Cooperación Técnica del Nopal (FAO-CACTUSNET). Organización de las Naciones Unidas para la Agricultura y la Alimentación. Roma. Italia.

Sáenz, C. y Montoya, L.C. 1999. Nopalitos: Nueva hortaliza para Chile. *El Campesino* 130(6): 4-7.

Sanz, C., Pérez, A.G., Olías, R. y Olías, J.M. 1999. Quality of Strawberry Packed with Perforated Polypropylene. *Journal of Food Science* 64: 748-752.

Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA) México. Fresas. 8 de Abril de 2008.  
<http://www.sag.gob.mx/infoagro/cadenas/fichas/frutas/Ficha%20Tecnica%20Fresa.pdf>

Secretaría de Salud. 2001. Programa Nacional de Prevención y Control del Cólera. Tercera edición. México. Mayo 28, 2008.  
<http://www.ssa.gob.mx>; <http://www.epi.org.mx>

Salinas, A. 2008. Comunicación Personal. Atlixco, Puebla. México.

Scheinvar, L. 1999. Taxonomía de las *Opuntias* utilizadas. pp. 21-28. *In: Agroecología, cultivo y usos del nopal. Estudio FAO Producción y Protección Vegetal N° 132.* Roma. Italia.

Sepúlveda, E., Sáenz, C., Aliaga, E. y Aceituno, C. 2007. Extraction and characterization of mucilage in *Opuntia spp.* *Journal of Arid Environments* 68: 534-545.

Singh, R.P. y Nirakartakusumah, M. A. 1992. *Advances in Food Engineering.* CRC Press Inc. Boca Ratón, FT. E.U.A.

Sudzuki, F., Muñoz, C. y Berger, H. 1993. El cultivo de la tuna (Cactus Pear). Universidad de Chile, Facultad de Ciencias Agrarias y Forestales, Escuela de Agronomía, Departamento de Producción Agrícola, Santiago. Pág. 88.

Tanada-Palmu, P.S. y Grosso, C.R.F. 2005. Effect of edible wheat gluten-based films and coatings on refrigerated strawberry (*Fragaria ananassa*) quality. *Postharvest Biology and Technology* 36: 199-208.

Tegegne, F. 2002. Fodder potencial of *Opuntia ficus-indica*. *Acta Hort.* 581: 343-345.

Uzun, I. 1996. Fruit and cladodes isosymes in cactus pear. *Acta Hort.* 438: 53-55.

Vargas, M., Albors, A., Chiralt, A. y González-Martínez, C. 2006. Quality of cold-store strawberries as affected by chitosan-oleic acid edible coatings. *Postharvest Biology and Technology* 41: 164-171.

Wardowski W.F., Nagi S. y Grierson, W. 1986. Fresh citrus fruits. Editorial Abi, Westport, CT. E.U.A.

Zhang, D. y Quantick, P. 1998. Antifungal effects of chitosan coating on fresh strawberries and raspberries during storage. *J. Hortic. Sci. Biotechnol.* 73: 763-767.