REFERENCE

Abreu, A.S., Oliveira, M., Rodrigues, R.M., Cerqueira, M.A., Vicente, A.A. and Machado, A.V. 2015. Antimicrobial nanostructured starch based films for packaging. Carbohydrate Polymer: 4: 21.

Adjouman, Y. D., Nindjin, C., Tetchi, F. A., Dalcq, A. C., Amani, N. G. and Sindic, M. 2017. Water vapor permeability of edible films based on improved cassava (*Manihot esculenta Crantz*) native starches. Journal of Food Processing and Technology: 8(2): 665.

Ahmad, M., Benjakul, S., Prodpan, T., and Agustini, T.W. 2012. Physico – Mechanical, and antimicrobial properties of gelatin film from the skin of unicorn leatherjacket incorporated with essential oils. Food Hydrocolloids : 28 :189-199.

Amin, A. M., Ahmad, A. S., Yin, Y. Y., Yahya, N., and Ibrahim, N. 2007. Extraction, purification and characterization of durian (*Durio zibethinus*) seed gum. Food Hydrocolloids: 21(2): 273–279.

An, D.S., Hwang, Y.I., Cho, S.H,, and Lee ,D.S. 1998 . Packaging of fresh curled lettuce and cucumber by using low density polyethylene films impregnated with antimicrobial agents. Journal Korean Food Science and Nutrition : 27: 675-681.

Appendini, P., and Hotchkiss, J.H. 2002. Review of antimicrobial food packaging. Innovation of Food Science : 3(2): 113-126.

Atares, L., and Chiralt, A. 2016. Essential oils as additives in biodegradable films and coatings for active food packaging – review. Trends in Food Science and Technology : 48 : 51-62

Bertuzzi, M. A., Gottifredi, J. C., and Armada, M. 2012. Mechanical properties of a high amylose content corn starch based film, gelatinized at low temperature. Brazilian Journal of Food Technology : 15(3): 219-227.

Biasi Garbin, P., Saori, O., Morey, A, T., Fernandes, S., Belotto., Morguette, A., Armando, C,., Kian, D., Nakazato, G., Nakamura, C,V., and Yamada , S, F. 2015. Effect of Eugenol against *Streptococcus agalactiae* and Synergistic Interaction with Biologically Produced Silver Nanoparticles. Pharmaceutical Journal : 3 : 456-462.

Bourbon, A.I, Pinheiro, A.C, and Cerqueira, M.A. 2011. Physico-chemical characterization of chitosan-based edible films incorporating bioactive compounds of different molecular weight. Journal Food Engineering : 106: 111-118

Bourtoom, T. 2007. Plasticizers effect on the properties of biodegradable blend film from rice starch-chitosan. Journal of Science Technology: 30(1): 149-155.

Burt,S. 2004, Essential oils: their antibacterial properties and potential applications in foods. International Journal of Food Microbiology : 94 : 323-353

Cano, A., Chafer, M., Chiralt, A., and González-Martínez, C. 2016 . Development and characterization of active films based on starch-PVA, containing silver nanoparticles. Food Packaging Shelf Life ; 10: 16-24.

Carson, C.F., Mee, B.J., Rilet, T.F. 2002. Mechanism and action of *Melaleuca alternifolia* (tea tree) oil of *Staphylococcus aureus* determined by time kill, leakage, lysis and salt tolerant assays and electron microscopy. Antimicrobial agents and Chemotherapy : 46 : 1914-1920

Center of Food Safety. 2014. Microbiological guidelines for food. Food and Environmental Hygiene Department Ministry of Hongkong : 12-14

Chao, S. C., Gary Young, D., and Oberg, C. J. 2000. Screening of inhibitory activity of essential oils on selected bacteria, fungi, and virusses. Journal of Essential Oil Research :12: 639-649.

Chawengkijwanich ,C., and Hayata, Y.2008. Development of TiO2 powder-coated food packaging film and its ability to inactivate *Escherichia coli* in vitro and in actual tests. International Journal Food Microbiology : 123: 288-292.

Coles, R., McDowell, D.,and Kirwan, M.J. 2003. Introduction. In: Coles, R., McDowell, D.,and Kirwan, M. (eds) Food Packaging Technology. Boca Raton, FL: CRC Press : 1–31.

Cossu, A., Wang, M. S., Chaudari, A., and Nitin, N. 2015 . Antifungal Activity Against *Candida albicans* of Starch Pickering Emulsion with Thymol or Amphoterecin Bin Suspension and Calcium Alginate Films . International Journal of Pharmaceutics :493: 233-242

Costa C, Conte C, Buonocore AGG, Del Nobile MA. 2011. Antimicrobial silver-montmorillonite nanoparticles to prolong the shelf life of fresh fruit salad. International Journal of Food Microbiology. : 148: 164-170.

Cutter, C.N., Willett, J.L., and Siragusa, G.R. 2001. Improved antimicrobial activity of nisin-incorporated polymer films by formulation change and addition of food grade chelator. Application of Microbiology :33(4): 325-328.

Devi, S., Kumar, M., Ravi., Jagrathi T., and Sharma, M. 2015. Role of different phytoconstituents from Euphorbia hirta l. in disease prevention . World journal of pharmaceutical research : 4(1) : 2173 – 2190.

Dispaqua, R., Gail, B., Nikki, H., and Mike , E . 2007. Membrane Toxicity of Antimicrobial Compounds from Essential Oils

FAO .2011, Global Food Loses and food waste. Extent, causes and prevention. Rome 1 – 29

Fernandez, X., Chemat, F., Do, T., Carénini, E., 2013. Essential Oils: Virtues and Applications. Vuibert, Paris.

Ghanbari, M., and Shahedi, M. 2018. Effect of Baking Time and Temperature on Taphtun Bread Quality and Stalin . Science and Technology of Agricultural and Natural Resources Journal : 43: 327-333

Ghasemlou, N., Aliheidari, N., Fahmi, R., Shojaee-Aliabadi, S., Keshavarz, B., and Cran, M.J. 2013. Physical , mechanical, and barrier properties of con starch films incorporated with plant essential oils . Carbohydrate Polymers : 98 : 1117-1126

Gill, A.O., and Holley, R.A. 2006. Disruption of *Escherichia coli, Listeria monocytogenes* and *Lactobacillus sakei* cellular membranes by plant oil aromatics. International Journal Food Microbia : 108(1) :1-9

Ginting, M.H.S., R .Hasibuan., M. Lubis., D. S, Tanjung., and N. Iqbal. 2017. Effect of Hydrochloric Acid Concentration as Chitosan Solvent on Mechanical Properties of Bioplastics from Durian Seed Starch (Durio Zibethinus) with Filler Chitosan and Plasticizer Sorbitol. Faculty of Engineering, Medan, Sumatera Utara, Indonesia.

Guynot, M.E., Ramos, A.J., Seto, L., Purroy, P., Sanchiz, V., and Marin, S. 2003. Antifungal activity of volatile compounds generated by essential oils against fungi commonly causing deterioration of bakery products. Journal of Applied Microbiology : 94 : 893-899.

Han, J. H. and Floros, J. D. 1997. Casting antimicrobial packaging films and measuring their physical properties and antimicrobial activity. Journal of Plastic Film and Sheeting : 13(4): 287-298.

Han, J., and Floros, J. 1999. Simulating diffusion model and determining diffusivity of potassium sorbate through plastics to develop antimicrobial packaging film. Food Process Pres : 22(2): 107-122.

Han, J.H.2000. Antimicrobial food packaging. Food Technology: 54(3): 56-65

Hill, W.M., Reaume, J., and Wilcox, J.C. 1976. Total plate count and sensory evaluation as measures of luncheon meat shelf life. Journal Milk Food Technology : 39(11) : 759-767.

Hu, G., Chen, J., and Gao, J. 2009. Preparation and Characteristics of Oxidized Potato Starch Films. Carbohydrate Polymers : 76 : 291-298.

Iseppi, R., Pilati, F., Marini, M., Toselli, M., Niederhäusern, S., and Guerrieri, E. 2008 Anti-listerial activity of a polymeric film coated with hybrid coatings doped with Enterocin 416K1 for use as bioactive food packaging. Int Journal of Food Microbiology :123: 281-287.

Ishitani, T. 1995. Active packaging for food quality preservation. In: Ackermann, P., Jagerstad, M., and Ohlsson. Food and Food Packaging Materials-Chemical Interactions. The Royal Society of Chemistry: Cambridge :177-188.

Kamatou,G.P., Viljoen, A., and Vermaak, I. 2012. Eugenol-From the remote Maluku island to the international market place : a review of a remarkable and versatile molecule. Molecules : 17 : 6953 – 6981.

Kaskatepe , B., Kiymaci, E. M., Suzuk, S., Erdem, S, A., Cesur, S., and Yildiz , S. 2016. Antibacterial Effects of Cinnamonj Oil Against *Carbapenem Resistant Nosocomial , Acetobacter baumannii ,* and *Pseudomonas aeruginosa* Isolates. Industrial Crops and Products:81 : 191-194

Khalifa, I., Barakat, H.A., El-Mansy, H., and Soliman, S.A. 2016. Improving the shelf-life stability of apple and strawberry fruits applying chitosan incorporated olive oil processing residues coating. Food Packaging Shelf Life : 9: 10-19

Kim, H.Y., Jane, J., and Lamsal, B. 2017. Hydroxypropylation improves film properties of high amylose corn starch. Industrial Crops and Products 95.

Kipngetich., Terer, E., and Hillary, M. 2013. A Blend of Green Algae and Sweet Potato Starch as a Potential Source of Bioplastic Production and its Significance to The Polymer Industry. International Journal of Green and Herbal Chemistry : 2 : 18-28

Kokate, C.K. 2000. Practical Pharmacognosy. Vallabh Prakashan : 218

Kuuliala, L., Pippuri, T., and Hultman, T.J. 2015. Preparation and antimicrobial characterization of silver-containing packaging materials for meat. Food Packag Shelf Life : 6: 53-60.

Jung, H., and Han, I.2005. Innovation in Food packaging, Antimicrobial Food Packaging : 3: 95-103.

Laekeman, G.M., Van Hoof, L., Haemers, A., Vanden Berghe, D.A., Herman, A.G., and Vlietinck., A.J. 1990. Eugenol a valuable compound for *in vitro* experimental research and worthwhile for further *in vivo* investigation.

Labuza, T., and Breene, W. 1989. Applications of active packaging for improvement of shelf-life and nutritional quality of fresh and extended shelf-life foods. Journal Food Process Press: 13: 1-89.

Lee, J.Y., Garcia, C.V., Chin, G.H., and Kim, J.T. 2019. Antibacterial and antioxidant properties of hydroxypropyl methylcellulose-based active composite films incorporating oregano essential oil nano-emulsions. Food Science and Technology : 106 : 164-171

Lewis, M. J. 2006. Physical Properties of Foods and Food Processing System. Cambridge: Woodhead Publishing Limited.

Li, F., Ye, L., and Lei, G, 2018. Combined effect of octenyl succination and oregano essential oil on sweet potato starch films with an emphasis on water resistance. International Journal of Biological Macromolecules : 115: 547-553

Liu, H., Du ,Y.M., Wang, X.H., and Sun, L.P. 2004. Chitosan kills bacteria through cell membrane damage. International Journal of Food Microbiology :95: 147-155.

Lopez, S., Davies, D. R., Giraldez, F. J., Dhanoa, M. S., Dijkstra, J., and France, J. 2005. Assessment of nutritive value of cereal and legume straws based on chemical composition and *in vitro* digestibility. Journal of Science and Food Agriculture: 85 (9): 1550-1557

Majid., Ishrat., Mamta., Thakur., and Vikas, N.,. 2018. Biodegradable Packaging Materials. In Reference Module in Materials Science and Materials Engineering. Elsevier.

Manso, S., Cacho Nerin, F., Becerill, R., and Nerin, C. 2013. Combined Analytical and Microbiological Tools to Study The Effect on Aspergillus flavus of Cinnamon Essential Oil Contained in Food Packaging . Food Control :30 :370-378.

Moradi, M., Tajik, H., Rohani, S.M.R., Oromiehie, A.R., Malekinejad, H., Aliakbarlu, J., and Hadian, M. 2012. Characterization of antioxidant chitosan film incorporated with Zataria multiflora Boiss essential oil and grape seed extract. Food Science and Technology : 46 : 477-484

Morillon, V., Debeaufort, F., Blond, G., Capelle, M. and Voilley, A. 2002. Factors affecting the moisture permeability of lipid-based edible films: review. Cri. Rev. Food. Science: 42: 67-89.

Muriel-Galet ,V., Cerisuelo, J.P., Lopez-Carballo, G., Lara, M., Gavara, R., Hernandez-Munoz, P. 2012. Development of antimicrobial films for microbiological control of packaged salad. International Journal of Food Microbiology: 157: 195-201

Nawab, A., Alam, F., Haq, M. A. and Hasnain, A. 2016. Biodegradable film from mango kernel starch: Effect of plasticizers on physical, barrier, and mechanical properties. Starch/Stärke: 68(9): 919–928

Nayik, G.A., and Muzaffar, K,. 2014. Developments in packaging of fresh fruitsshelf life perspective: A review. Am Journal of Food Science and Nutrition : 1(5): 34-39.

Nazzaro, F., Ratianni, F., De Martino, L., Coppola, L., and De Feo, V. Effect of essential oil on pathogenic bacteria. Journal of Pharmaceuticals : 6(12) : 1451-1474

Niranjana Prabhu, T., and Prashantha, K. 2016. A Review on Present Status and Future Challenges of Starch Based Polymer Films and Their Composites in Food Packaging Applications, Polymer Composites. Journal of Polymer Chemistry : 8 (2) : 123-130

Noshirvani,N., and Fasihi, H. 2018. Control of *Aspergillus niger* in vitro and in vivo by Three Iranian Essential Oil . International Food Research Journal: 25 (4): 1745-1752

Ojagh, M.H., Mosoud, R.S., Hadi, R.S., and Hashem, H. 2010. Effect of chitosan coatings enriched with cinnamon oil on the quality of refrigerated rainbow trout. Food Chemistry : 120 : 193-198.

Oussalah, M., Caillet, S., Salmieri, S., Saucier, L., and Lacroix, M,. 2004. Antimicrobial and antioxidant effects of milk protein based film containing essential oils for the preservation of whole beef muscle. Journal of Agriculture Food Chemistry : 52: 5598-5605.

Quintavalla ,S., and Vicini, L . 2002 . *A*ntimicrobial of Food Packaging in Meat Industry . Meat Science :62 :373-380

Saberi, B., Vuong, Q. V., Chockchaisawasdee, S., Golding, J. B., Scarlett, C. J. and Stathopoulos, C. E. 2015. Mechanical and physical properties of pea starch edible films in the presence of glycerol. Journal of Food Processing and Preservation: 1-13.

Sanchez-Gonzales, L., Chafer, M., Hernandez, M., Chiralt, A., and Gonzalez-Martinez, C. 2011. Antimicrobial activity of polysaccharide films containing essential oils. Food Control : 22(8) : 1302-1310

Sanyang, M. L., Sapuan, S. M., Jawaid, M., Ishak, M. R. and Sahari, J. 2015. Effect of plasticizer type and concentration on tensile, thermal and barrier properties of biodegradable films based on sugar palm (Arenga pinnata) starch. Polymers :7: 1106-1124.

Siracusa, Valentina, Pietro Rocculi, Santina Romani, and Marco Dalla Rosa. 2008. Biodegradable Polymers for Food Packaging: A Review. Trends in Food Science and Technology 19 (12): 634–643.

Siragusa, G.R., Cutter, C.N., and Willett, J.L. 1999. Incorporation of bacteriocin in plastic retains activity and inhibits surface growth of bacteria on meat. Food Microbiology : 16: 229-235.

Sitomurang, R. 2009. Usaha Pembuatan Keripik Biji Durian Bumbu Balada Dengan Tingkat Pedas yang Berbeda. Skripsi. Fakultas Pertanian. Universitas Sumatera Utara.

Sivarooban, T., Hettiarachchy, N.S., and Johnson, M.G. 2008. Physical and antimicrobial properties of grape seed extract, nisin, and EDTA incorporated soy protein edible films. International Journal of Food Science : 41: 781-5

Song, K., Zuo, G., and Chen, F. 2018. Effect of essential oil and surfactant on the physical and antimicrobial properties of corn and whear starch films. International Journal of Biological Macromolecules : 107 : 1302-1309.

Sorrentino., Andrea., Giuliana, G., and Vittoria, V. 2007. Potential Perspectives of Bio-Nanocomposites for Food Packaging Applications. Trends in Food Science and Technology : 18 (2): 84–95.

Su, W., Lu, K,. and Chang. 1998. Microstructure and Physicochemical Characteristics of Starches in Six Bean Varieties and Their Bean Paste Products. Lebenism. Wiss. Technology : 31 : 260–273.

Suppakul, P., Miltz, J., Sonneveld, K., and Bigger, S.W. 2006. Characterization of antimicrobial films containing basil extracts. Packaging Technology : 19: 259-68.

Šuput, D., Lazic, V. Jelic, A., Levic, L., Pezo, L., Hromis, N. and Popovic, S. 2016. The effect of sorbitol content on the characteristics of starch based edible films. Journal on Processing and Energy in Agriculture: 17: 106-109.

Tankhiwale, R., and Bajpai, S.K. 2012. Preparation, characterization and antibacterial applications of ZnO-nanoparticles coated polyethylene films for food packaging. Colloid Surf B : 90:16-20

Tongnuanchan, P., Benjakul, S., Prodpan, T., and Nilsuwan, K. 2015. Emulsion film based on fish skin gelatin and palm oil : physical , structural and thermal properties. Food Hydrocolloids : 48 : 248-259

Tongdang, T. 2008. Some properties of starch extracted from three Thai aromatic fruit seeds. Starch Staerke: 60(3–4): 199–207.

Ubwa, S., Abah, J., Asemave, K., and Shambe, T. 2012. Studies in The Gelatinization Temperature of Some Cereal Starches. International Journal of Chemistry : 4 (6) : 22–28

Valencia-Sullca, C., Vargas , M., Atares, A., and Chiralt, A. 2018. Thermoplastic cassava starch-chitosan bilayer films containing essential oils. Food Hydrocolloids : 75 : 107-115

Van Long, N. N., Joly, C., and Dantingny,P. 2016. Active Packaging with Antifungal Activities . International Journal of Food Microbiology:220 : 73-90.

Vargas, A., John, C., and Charles, M.K. 2009. Plant-derived sucrose is a key element in the symbiotic association between *Trichoderma virens* and Maize plants. Department of Plant Pathology and Microbiology, Texas A and M University College Stations

Villalobos, R., Chanona, J., Hernandez, P., and Guiterrez, G.A. 2005. Gloss and transparency of hydroxypropyl methylcellulose films containing surfactants as affected by their microstructure. Food Hydrocolloids : 19 : 53-61.

Wittaya, T. 2009. Microcomposites of rice starch film reinforced with microcrystalline cellulose from palm pressed fiber. International Food Research Journal : 16: 493-500.

Wu, J., Ge, S., and Liu, H. 2014. Properties and antimicrobial activity of silver carp (Hypophthalmichthys molitrix) skin gelatin-chitosan films incorporated with oregano essential oil for fish preservation. Food Packaging Shelf Life : 2214-2294.

Xing, Y., Li, X.H., Zhang, L., Xu, Q., Che, Z., and Li, W. 2012. Effect of TiO2 nanoparticles on the antibacterial and physical properties of polyethylene-based film. Progress in Organic Coating : 73: 219-224

Yu, J., Wang, N., and Ma, X. 2005. The effects of citric acid on the properties of thermoplastic starch plasticized by glycerol. Starch : 57: 494-504.

Zuraida, A., Yusliza, Y., Anuar, H., and Muhaimin, R. 2012. The Effect of Water and Citric Acid on Sago Starch Bio-plastics. International Journal of Food Science : 19 : 715–719