

## BIBLIOGRAPHY

- Aisyah, Y., Irwanda, L. P., Haryani, S., Safriani, N. 2017. Characterization of corn starch-based edible film incorporated with nutmeg oil nanoemulsion. IOP Conf. Series: Materials Science and engineering 352, 012050.
- Ali, M. S., Alam, M. S., Alam, N., Siddiqui, M. R. 2014. Preparation, characterization and stability study of dutasteride loaded nanoemulsion for treatment of benign prostatic hypertrophy. Iranian Journal of Pharmaceutical
- American Society for Testing and Materials (ASTM). 1995. Standard Test Method for Water Vapor Transmission of Material. ASTM Book of Standard.
- Amelia, B., E. Saepudin, A.H. Cahyana, D.U. Rahayu, AS.. Sulistyoningrum, and J. Haib. 2017. "GC-MS analysis of clove (*Syzygium aromaticum*) bud essential oil from Java and Manado." AIP Conference Proceedings.
- Anderson, C. A. P. 2018. Presence of *Escherichia coli* and *Salmonella enteritica* on Wheat and Possible Control Measures. Thesis. North Dakota State University, Fargo.
- Bahram, S., Rezaei, M., Soltani, M., Abdolghasem, K., Ojagh, S. M., Abdollahi, M. 2013. Whey protein concentrate edible film activated with cinnamon essential oil. Journal of Food Processing and Preservation ISSN 1745-4549.
- Benavides, S., Villalobos, C. R., Reyes, J.E. 2012. Physical, mechanical and antibacterial properties of alginate film: Effect of the crosslinking degree and oregano essential oil concentration. Journal of Food Engineering, 110(2), 232-239.
- Bourtoom,T. 2008. Edible films and coatings: characteristics and properties. International Food Research Journal, 15(3),237-248.
- Bloomfield, S. F. 1991. Methods for assessing antimicrobial activity. In: Denyer, S. P, Hugo, W. B, editors. Mechanisms of action of chemical biocides their study and exploitation. Blackwell Scientific Publication: London.
- Cava, R., Nowak, E., Taboada, A. and Marin-Iniesta, F. 2007. Antimicrobial Activity of Clove and Cinnamon Essential Oils against *Listeria monocytogenes* in Pasteurized Milk. Journal of Food Protection, 70, 12, 2757-2763.
- Campaniello, D., Corbo, M.R., Sinigaglia, M. 2010. Antifungal Activity of Eugenol against *Penicillium*, *Aspergillus*, and *Fusarium* Species. *Journal of Food Protection*, Vol. 73 (6) 1124-1128.

- Chanamai, R., McClements, D. J. 2006. Dependence of creaming and rheology of monodisperse oil-in-water emulsions on droplet size and concentration. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 172(1-3), 79-86.
- Dashipour, A.sHosseini H., Shojoae-Aliabadi, S., and Ghaanati, K. 2014. Physical, antioxidant and antimicrobial characteristics of carboxymethyl cellulose edible film cooperated with clove essential oil. *Zahedan Journal of Research in Medical Sciences* 16 (8):34-42.
- Farahnaky, A., Saberi, B., Majzoobi, M. 2012. Effect of Glycerol on Physical and Mechanical Properties of Wheat Starch Edible Films. *Journal of Texture Studies*, 44 176-186.
- Frascareli, E. C., Silva, V. M, Tonon, R. V., Hubinger, M. D. 2011. Physicochemical Properties of Coffee Oil Microcapsules Produced by Spray Drying. *III Jornadas Internacionais*.
- Fu,Y., Zu, Y., Chen, L., Shi, X., Wang, Z., Sun, S. and Efferth, T. 2007. Antimicrobial Activity of Clove and Rosemary Essential Oils Alone and in Combination. *Phytotherapy Research*, 21, 989-994.
- Funami,T., Kataoka,Y., Omoto,T. Goto,Y., Asai,L., and Nishinari,K. 2005. Food Hydrocolloids, 19,15-24.
- Galus,S and Lenart, A. 2013. Development and characterization of composite edible films based on sodium alginate and pectin. *Journal of Food Engineering* 115, 459-465.
- Galus,S. and Kadzinska,J. 2015. Moisture Sensitivity, Optical, Mechanical and Structural Properties of Whey Protein-Based Edible Films Incorporated with Rapeseed Oil. *Food technol. Biotechnol.* 54 (1) 75-89.
- Goni, P., Lopez,P., Sanchez, C. Gomez-Lus, R. Becerril,R., Nerin, C. 2009. Antimicrobial activity in the vapour phase of a combination of cinnamon and clove essential oils. *Food Chem*, 116,982-989.
- Grover-Lakomia, L., Fong, E. 1999. "Microbiology for Health Careers". Sixth Edition. New York; Delamr Publishers.
- Guilbert, S., Gontard, N., and Gorris, L.G.M. 1996. Prolongation of the shelf life of perishable food products using biodegradable films and coatings, *Lebensm. Wiss. Technol.*, 29 (1-2) :10-17.
- Hadnadev, T. D., Dokic P., Krstonosi, V. and Hadnadev, M. 2013. Influence of oil phase concentration on droplet size distribution and stability of oil-in water emulsions. *European Journal of Lipid Science and technology*, 115(3), 313-321.
- Hasenhuettl, G.L. and Hartel,R. W. 2008. "Food Emulsifiers and their Applications", 2<sup>nd</sup> edition. New York; Springer.

- Hyldgaard, M., Mygind, T., and Meyer, R.K. 2012. Essential oils in food preservation: mode of action, synergies, and interactions with food matrix components. *Frontiers in Microbiology*.
- Jimenez, A., Fabra, M.J., Talens, P., Chiralt,A. 2013. Phase transitions in starch based films containing fatty acids. Effect on water sorption and mechanical behavior. *Food hydrocolloids*, 30(1), 408-418.
- Kale, S. N., Deore, S. L. 2016. Emulsion Micro Emulsion and Nano Emulsion: A Review. *Systematic Reviews in Pharmacy*, 8(1), 39-47.
- Katsuki, K., Miyagawa, Y., Matsuno, R. Adachi,S. 2015. Evolution of the Size Distribution of Oil-droplets Over Time in Oil-in-water Emulsions. *Japan Journal of Food Engineering*, 16, 3, 231-234.
- Khalaphallah, R. 2015. Antimicrobial activity of some heterocyclic compounds and herbal extracts on plant pathogens. *Chem Sci Rev Lett* 4 (13):171-178.
- Kumar, K. S. 2010. Extraction of Essential Oil Using Steam Distillation. Thesis. National Institute of Technology, Rourkela.
- Kumar, Y., Agarwal. S., Srivastava, A., Kumar, S., Agarwal, G. Khan, M. 2014. Antibacterial activity of Clove (*Syzygium aromaticum*) and Garlic (*Allium sativum*) on different pathogenic bacteria. *Int. J. Pure App. Biosci.* 2 (3):305-311.
- Kusnadi, J., Budyanto, P. 2015. Antibacterial Active Packaging Edible Film Formulation with Addition Teak (*Tectona grandis*) Leaf Extract. *Int. J. Life Sci. Biotech. Pharm. Res.* (4) 2.
- Khan, F., Dwivedi, A. K. 2018. A Review on Techniques Available for the Extraction of Essential Oils from Various Plants. *International Research Journal of Engineering and Technology* 5, 5.
- Laaman, T. R. 2011. "Hydrocolloids in Food Processing". Wiley-Blackwell IFT Press; Iowa.
- Lauzardo, A., Banos, S., Velasquez del Valle, M., Trejo Espino, J. 2005. Identification of *Rhizopus stolonifera* (Ehrenb.:Fr.) Vuill., Causal Agent of Rhizopus Rot Disease of Fruit and Vegetables. *Revista Mexicana de Fitopatología* Vol. 24, No. 1.
- Lis-Balchin,M. 2006. Aromatherapy Science: A guide for healthcare professionals. London; Pharmaceutical Press.
- Marchese, A., Barbieri, R., Coppo, E., Orhan, I. E., Daglia, M., Nabavi, S.F., Izadi, M., Abdollahi, M., Nabavi, S. M. and Ajami, M. 2017. Antimicrobial activity of eugenol and essential oils containing eugenol: A mechanistic viewpoint. *Critical Reviews in Microbiology*, DOI: 10.1080/1040841X.2017.1295225.

- McClenny, N. 2005. Laboratory detection and identification of *Aspergillus* species by microscopic observation and culture: the traditional approach. Medical Mycology Supplement 43, S125-S128.
- McClements, D. J. 2016. "Food Emulsions: Principle, Practices, and Techniques". Third Edition. Boca Raton; CRC Press.
- Nafchi, A. M., Moradpour, M., Saeidi, M., Alias, A.K. 2013. Thermoplastic starches: Properties, challenges, and prospects. Starch/Starke 65, 61-72.
- Packyanathan, J.S., Prakasam, G. 2017. Antibacterial Effect of Clove Oil against Clinical Strains of *Escherichia coli*. J. Pharm. Sci & Res. Vol 9(7), 1203-1204.
- Parthasarathy, V. A., Chempakam, B., Zachariah, T. J. 2008. "Chemistry of Spices". Oxfordshire; CAB International.
- Pinto, E., Vale-Silva, L., Cavalein, C., Salgueiro, L. 2009. Antifungal activity of the clove essential oil from *Syzygium aromaticum* on *Candida*, *Aspergillus* and dermatophyte species. Journal of Medical Microbiology, 58, 1454-1462.
- Pulatsu, E. T., Sahin, S., Sumnu, G. 2017. Characterization of different double emulsion formulation based on food grade emulsifiers and stabilizers. Journal of Dispersion Science and Technology, DOI:10.1080/01932691.2017.13709021.
- Preedy, V. R. 2016. "Essential Oils in Food Preservation, Flavor, and Safety". London; Elsevier Inc.
- Radha-Krishnan, K., babuskin, S., Rakhavan, K. R., Tharavin, R. 2015. Potential application of corn starch edible films with spice essential oils for the shelf life extension of red meat. Journal of Applied Microbiology ISSN 1364-5072.
- Robertson, G. L. 2013. "Food Packaging: Principles and Practice". Boca Raton; CRC Press.
- Roohinejad, S., Greiner, R., Oey, I. and Wen, J. 2018. "Emulsion-based Systems for Delivery of Food Active Compounds". West Sussex: John Wiley & Sons Ltd.
- Sahin,S., Sumnu, S.G. 2006. "Physical Properties of Foods". Springer; New York.
- Sandhu, K. S., Singh, N. 2007. Some properties of corn starches II: Physicochemical, gelatinization, retrogradation, pasting and gel textural properties. Food Chemistry 101. 1499-1507.
- Sanla-Ead, N. Jangchud, A., Chohenchob, V. and Suppakul, P. 2011. Antimicrobial activity of cinnamaldehyde and eugenol and their activity after incorporation into cellulose-based packaging films. Packaging Technology and Science Packaging Sci. 25, no. 1: 7-17.

- Sheeladevi, A. and Ramanathan, N. 2012. Antibacterial Activity of Plant Essential Oils against Food Borne Bacteria. International Journal of Pharmaceutical & Biological Archives;3 (5):1106-1109.
- Siagian, V. J. 2014. "Outlook Komoditi Cengkeh" Pusat Data dan Sistem Informasi Pertanian Kementerian Pertanian; Jakarta.
- Sjöblom, J. 2001. "Encyclopedic handbook of emulsion technology". CRC Press; New York.
- Suput, D., Lazic, V., Pezo, L., Markov, S., Vastag, Z., Popovic, L. 2016. Characterization of Starch Edible Films with Different Essential Oils Addition. Pol. J. Food Nutr. Sci., Vol. 66, 4, 277-285.
- Tadros, T. 2013. "Emulsion Formation and Stability". Weinheim; Wiley VCH.
- Tarek, N. Hassan, H. M., AbdelGhani, S. Radwan, I. A., Hammouda, O. 2014. Comparative chemical and antimicrobial study of nine essential oils obtained from medicinal plants growing in Egypt. Beni-Suef University Journal of Basic and Applied Sciences 1-8.
- Taylor, T. A., Unakal, C. G. 2017. *Staphylococcus aureus*. <https://www.ncbi.nlm.nih.gov/books/NBK441868/> Accessed on November 10, 2018.
- Terjung, N., Löffler, M., Gibis, M., Hinrichs, J., Weiss, J. 2012. Influence of droplet size on the efficacy of oil-in-water emulsions loaded with phenolic antimicrobials. Food Funct., 3, 290-301.
- Valdes, A., Ramos, M., Beltran, A., Jimenez, A and Garrigos, M.C. 2017. State of the Art of Antimicrobial Edible Coatings for Food Packaging Applications. Coatings 7, 56.
- Villalobos, R., Chanona, J., Hernandez, P., Gutierrez, G., Chiralt, A. 2005. Gloss and transparency of hydroxypropyl methylcellulose films containing surfactants as affected by their microstructure. Food Hydrocolloids 19, 53-61.
- Weiss, J., Muschiolik, G. 2007. Factors Affecting the Droplet Size of Water in Oil emulsions (W/O) and the Oil Globule Size in Water-in-Oil-in-Water Emulsions (W/O/W). Journal of Dispersion Science and Technology, 28:5, 703-716.
- Xu, J.G., Liu, T., Hu, Q.P, Cao, X.M. 2016. Chemical Composition, Antibacterial Properties and Mechanism of Action of Essential Oil from Clove buds against *Staphylococcus aureus*. Molecules 21, 1194.
- Xing, Y., Xu, Q., Li, X., Che, Z., Yun, J. 2011. Antifungal activities of clove oil against *Rhizopus nigricans*, *Aspergillus flavus* and *Penicillium citrinum* in vitro and in wounded fruit test. Journal of Food Safety, 32 (1), 84-93.

Yildrim, M. 2015. Stability of Double Emulsions for Food Applications. Thesis.  
Middle East Technical University.

