



## REFERENCES

- Akesowan, A. and Choonhairun, A. 2014. Optimization of Konjac Gel Texture Prepared with  $\kappa$ -carrageenan and Sweeteners and their Applications in Orange Jelly. *Advance Journal of Food Science and Technology*, 6(8), pp.961-967.
- Akesowan, A. and Choonhairun, A. 2021. The Use of Stevia and Monk Fruit Sweeteners for Sugar Replacement in Green Tea Agar Jellies. *Food Scientech Journal*, 3(2), pp.93-100.
- Ali, N. M. et al. 2012. The Promising Future of Chia, *Salvia hispanica L.* *Journal of Biomedicine and Biotechnology*, 2012(1), pp.1-9.
- Álvarez-Chávez, L. M., Valdivia-López, M. D. L. A., Aburto-Juarez, M. D. L., & Tecante, A. 2008. Chemical characterization of the lipid fraction of Mexican chia seed (*Salvia hispanica L.*). *International Journal of Food Properties*, 11(3), pp.687-697.
- Ambriz-Perez, D. L., Leyva-López, N., Gutiérrez-Grijalva, E. P., and Heredia, J. B. 2016. Phenolic compounds: Natural alternative in inflammation treatment. A Review. *Cogent Food & Agriculture*, 2(1), pp.1-14.



Atteh, J., Onagbesan, O., Tona, K., Buyse, J., Decuypere, E., and Geuns, J. 2011.

Potential use of *Stevia rebaudiana* in animal feeds. *Arch de Zootec*, 60(229), pp.133-136.

Ayerza, R. 2016. Crop year effects on seed yields, growing cycle length, and chemical composition of chia (*Salvia hispanica L.*) growing in Ecuador and Bolivia. *Emirates Journal of Food and Agriculture*, 28(3), pp.196-200.

Bayarri, S., L. Izquierdo, L. Durán and E. Costell, 2006. Effect of addition of sucrose and aspartame on the compression resistance of hydrocolloids gels. *International Journal of Food Science and Technology*, 41, pp. 980-986.

Bellavite, P. and Donzelli, A. 2020. Hesperidin and SARS-CoV-2: new light on the healthy function of citrus fruits. *Antioxidants*, 9(8), pp.742.

Beltz, L.A. et al. 2006. Mechanisms of cancer prevention by green and black tea polyphenols. *Anti-cancer Agents in Medicinal Chemistry*, 6(5), pp.389-406. <https://doi.org/10.2174/187152006778226468>.

Berk, Z. (2016). *Citrus Fruit Processing*, Israel: Academic press.

Brah, A.S. et al. 2023. Toxicity and therapeutic applications of citrus essential oils (CEOs): a review. *International Journal of Food Properties*, 26(1), pp.301-326. <https://doi.org/10.1080/10942912.2022.2158864>.



Breksa, A.P. *et al.* 2011. Limonoid content of sour orange varieties. *Journal of the Science of Food and Agriculture*, 91(10), pp.1789-1794. <https://doi.org/10.1002/jsfa.4383>.

Brütsch, L. *et al.* 2019. Chia seed mucilage—a vegan thickener: isolation, tailoring viscoelasticity and rehydration. *Food and Function*, 10(8). pp.4854-4860. <https://doi.org/10.1039/c8fo00173a>.

Campo, V. L., Kawano, D. F., da Silva Jr., D. B., and Carvalho, I. 2009. ‘Carageenans: biological properties, chemical modifications and structural analysis: a review’, *Carbohydrate Polymers*, 77(2), pp.167-180.

Capitani, M. I., Spotorno, V., Nolasco, S. M., & Tomás, M. C. 2012. Physicochemical and functional characterization of by-products from chia (*Salvia hispanica L.*) seeds of Argentina. *LWT – Food Science and Technology*, 45(1), pp.94-102. <https://doi.org/10.1016/j.lwt.2011.07.012>

Carrera-Lanestosa, A., Moguel-Ordóñez, Y., and Segura-Campos, M. 2017. *Stevia rebaudiana* Bertoni: A natural alternative for treating diseases associated with metabolic syndrome. *Journal of Medicinal Food*, 20(10), pp.933–943.

Chaturvedula, V. S. P.; Upreti, M.; and Prakash, I. 2011. Diterpene Glycosides from Stevia Rebaudiana. *Molecules*, 16, pp.3552-3562.



- Ciau-Solís, N. *et al.* 2014. Chemical and Functional Properties of Chia Seed (*Salvia hispanica L.*) Gum. *International Journal of Food Science*, 2014(1), pp.1-5. <https://doi.org/10.1155/2014/241053>.
- de Falco, B., Amato, M., and Lanzotti, V. 2017. Chia seeds products: An overview. *Phytochemistry Reviews*, 16(4), pp.745-760.
- da Luz, J.M.R., Nunes, M.D., Paes, S.A., Torres, D.P., Silva, M.D.C.S.D., Kasuya, M.C.M. 2012. Lignocellulolytic enzyme production of Pleurotus ostreatus growth in agroindustrial wastes. *Brazilian Journal of Microbiology*, 43(4), pp.1508-1515.
- da Silva, V.M. *et al.* 2018. Bocaiuva jelly: preparation, physicochemical and sensory evaluation', *Revista Brasileira de Fruticultura*, 40(5), pp.1-9.
- Das, A. 2018. Advances in Chia Seed Research. *Applied Microbiology and Biotechnology*, 5(3), pp.5-7.
- De Ancos, B., Cilla, A., Barbera, R., Sanchez-Moreno, C., and Cano, M.P. 2017. Influence of orange cultivar and mandarin postharvest storage on polyphenols, ascorbic acid and antioxidant activity during gastrointestinal digestion. *Food Chemistry*, 225(1), pp.114-124.
- Djimtoingar, S. S., Derkyi, N. S. A., Kuranchie, F. A., and Yankyer, J. K. 2022. A review of response surface methodology for biogas process optimization. *Cogent Engineering*, 9(1), pp.1-35.



Ejaz, S., Ejaz, A., Matsuda, K., Chae, W. L. 2006. Limonoids as cancer chemopreventive agents. *Journal of the Science of Food and Agriculture*,

86(3), pp.339-345.

Ersus, S., & Cam, M. 2007. Determination of organic acids, total phenolic content, and antioxidant capacity of sour *Citrus aurantium* fruits.

*Chemistry of Natural Compounds*, 43(5), pp.607-609.

Etebu, E. and Nwauzoma, A.B. 2014. A review on sweet orange (*Citrus Sinensis*

L. Osbeck): Health, Diseases, and Management. *American Journal of Research Communication*, 2(2), pp.33-70.

Farag, M.A. et al. 2020. Sweet and bitter oranges: An updated comparative

review of their bioactives, nutrition, food quality, therapeutic merits and

biowaste valorization practices. *Food Chemistry*, 331(1), pp.1-13.

FAOSTAT. 2020. *Data of the Food and Agriculture Organization of the United States*. <http://www.fao.org/faostat/es/#data/QC/>. Accessed on 2 February

2024.

Formagio, A.S.N. et al. 2014. Evaluation of antioxidant activity, total flavonoids,

tannins and phenolic compounds in psychotria leaf extracts. *Antioxidants*,

3(4), pp.745-757. <https://doi.org/10.3390/antiox3040745>.

Fresco, P., Borges, F., Marques, M. P. M., & Diniz, C. 2010. The anticancer

properties of dietary polyphenols and its relation with apoptosis, *Current*

*Pharmaceutical Design*, 16(1), pp.114-134.



Gao, J., Brenan, M. A., Mason, S. L., and Brenan, C. S. 2016. Effect of Sugar Replacement with Stevianna and Inulin on the Texture and Predictive Glycaemic Response of Muffins. *International Journal of Food Science and Technology*, 51(9), pp.1979-1987.

Gattuso, G. et al. 2007. Flavonoid composition of citrus juices, *Molecules*, 12(8), pp.1641-1673. <https://doi.org/10.3390/12081641>.

Goyal, S. K., Samsher, S., and Goyal, R. K. 2010. Stevia (*Stevia rebaudiana*) a bio-sweetener: a review. *International Journal of Food Sciences and Nutrition*, 61(1), pp.1-10.

Grancieri, M., Martino, H.S.D., Gonzalez de Mejia, E. 2019. Chia Seed (*Salvia hispanica L.*) as a Source of Proteins and Bioactive Peptides with Health Benefits: A Review. *Comprehensive Reviews in Food Science and Food Safety*, 18(2), pp.480-499.

Grembecka, M. 2015. Natural sweeteners in a human diet. *Annals of the National Institute of Hygiene*, 66(3), pp.195-202. <https://pubmed.ncbi.nlm.nih.gov/26400114/>.

Gwak, M.J. et al. 2012. Relative sweetness and sensory characteristics of bulk and intense sweeteners. *Food Science and Biotechnology*, 21(3), pp.889-894. <https://doi.org/10.1007/s10068-012-0115-0>.



Holdt, S. L. and Kraan, S. 2011. Bioactive compounds in seaweed: functional food applications and legislation. *Journal of Applied Phycology*, 23(3), pp.543-597.

Hrncic, M.K. et al. 2020. Chia seeds (*Salvia hispanica L.*): An Overview—Phytochemical Profile, isolation Methods, and Application. *Molecules*, 25(11), pp.1-19. <https://doi.org/10.3390/molecules25010011>.

Huang, H.Y. and K.W. Lin. 2004. Influence of pH and added gums on the properties of konjac flour gels. *International Journal of Food Science and Technology*, 39, pp.1009-1016.

Ixtaina, V.Y., Nolasco, S.M., Tomás, M.C. 2008. Physical properties of chia (*Salvia hispanica L.*) seeds. *Industrial Crops and Products*, 28(3), pp.286-293.

Jabraili, A. et al. 2021. Biodegradable nanocomposite film based on Gluten/Silica/Calcium chloride: physicochemical properties and bioactive compounds extraction capacity. *Journal of Polymers and the Environment*, 29(8), pp.2557-2571. <https://doi.org/10.1007/s10924-021-02050-4>.

Jarosz, M. 2012. *Nutrition Standards for the Polish population - amendment*. Poland: Instytut Żywości i Żywienia.

Jian, J. et al. 2010. Formation Mechanism and Stability Study of Konjac Glucomannan Helical Structure. *Chinese Journal of Structural Chemistry*, 29(4), pp.543-550.



Jin, H. *et al.* 2013. Flavonoids from *Citrus unshiu* Marc. inhibit cancer cell

adhesion to endothelial cells by selective inhibition of VCAM-1. *Oncology Reports*, 30(5), pp.2336-2342. <https://doi.org/10.3892/or.2013.2711>.

Kaplan, B. and Turgut, K. 2019. Improvement of rebaudioside A diterpene

glycoside content in *Stevia rebaudiana* Bertoni using clone selection. *Turkish Journal of Agriculture and Forestry*, 43(2), pp.232-240.

Karadeniz, F. 2004. Main organic acid distribution of authentic citrus juices in

Turkey. *Turkish Journal of Agriculture and Forestry*, 28(4), pp.267-271.

<https://journals.tubitak.gov.tr/agriculture/issues/tar-04-28-4/tar-28-4-8-0310-2.pdf>.

Keinänen, M. 1993. Comparison of methods for the extraction of flavonoids from

birch leaves (*Betula pendula* Roth.) carried out using high-performance liquid chromatography. *Journal of Agricultural and Food Chemistry*, 41(11), pp.1986-1990. <https://doi.org/10.1021/jf00035a032>.

Kelebek, H., Canbaş, A. and Cabaroğlu, T. 2009. HPLC determination of organic

acids, sugars, phenolic compositions and antioxidant capacity of orange juice and orange wine made from a Turkish cv. Kozan. *Microchemical Journal*, 91(2), pp.187-192. <https://doi.org/10.1016/j.microc.2008.10.008>.

Kenawi, M.A. *et al.* 1994. The storage effects of calcium-fortified orange juice

concentrate in different packaging materials. *Plant Foods for Human Nutrition*, 45(3), pp.265-275.



Khalid, W., Khalid, M.Z., Arshad, M.S., Aziz, A., Rahim, M.A., Afzal, F. *et al.*

2022. Chia seeds (*Salvia hispanica L.*): A therapeutic weapon in metabolic disorders. *Food Science & Nutrition*, 2023(11), pp. 3-16.

Khan, M.K., Zill-E-Huma, and Dangles, O. 2014. A comprehensive review on flavanones, the major citrus polyphenols. *Journal of Food Composition and Analysis*, 33(1), pp.85-104. <https://doi.org/10.1016/j.jfca.2013.11.004>.

Klimczak, I. *et al.* 2007. Effect of storage on the content of polyphenols, vitamin C and the antioxidant activity of orange juices. *Journal of Food Composition and Analysis*, 20(3–4), pp.313-322.  
<https://doi.org/10.1016/j.jfca.2006.02.012>.

Kochikyan, V.T.; Markosyan, A.A.; Abelyan, L.A.; Balayan, A.M.; Abelyan, V.A. 2006. Combined enzymatic modification of stevioside and rebaudioside A. *Applied Biochemistry and Microbiology*, 42(1), pp.31-37.

Kopjar, M. *et al.* 2016. Influence of trehalose addition on antioxidant activity, colour and texture of orange jelly during storage. *International Journal of Food Science and Technology*, 51(12), pp.2640-2646.  
<https://doi.org/10.1111/ijfs.13250>.

Kosiorowska, A. *et al.* 2022. The effect of the addition of gold fax (*Linum usitatissimum* L.) and chia seeds (*Salvia hispanica* L.) on the physicochemical and antioxidant properties of cranberry jams. *European Food Research and Technology*, 248(11), pp.2865-2876.



Kothari, V. K. and Bal, K. 2010. An Infra-Red Heating Based Fast Method of Moisture Content Measurement and Its Application to Measure Blend Proportion of Polyester-Viscose Woven Fabrics. *Journal of Engineered Fibers and Fabrics*, 5(2), pp.22-26.

Kulczynski, B.; Kobus-Cisowska, J.; Taczanowski, M.; Kmiecik, D.; Gramza-Michałowska, A. 2019. The Chemical Composition and Nutritional Value of Chia Seeds-Current State of Knowledge. *Nutrients*, 11(6), pp.1-16.

Kumar, N. and Goel, N. 2019. Phytochemical Analysis of Leaf, Stem Bark, and Root Extracts of Cassia abbreviata Grown in Zambia. *Pharmacology & Pharmacy*, 13(5), pp.1-10.

Kuncoro, M. 2013. *Research Method for Business and Economics (4<sup>th</sup> ed.)*. Jakarta: Erlangga.

Lau, M. H., Tang, J., and Swanson, B.G. 2000. Kinetics of textural and colour changes in green asparagus during thermal treatments. *Journal of Food Engineering*, 45(4), pp.231-236.

Lestari, Y.N. *et al.* 2020. Analysis of Physicochemical and Sensory Quality of Chia Seeds Sport Energy Gel (*Salvia hispanica L.*) during Storage. *Proceedings of the 5th International Seminar of Public Health and Education*, Semarang: 22 July 2020, pp.603-612.

Letaief, H., Zemni, H., Mliki, A., and Chebil, S. 2016. Composition of Citrus sinensis (L.) Osbeck cv «Maltaise demi-sanguine» juice. A comparison



between organic and conventional farming. *Food Chemistry*, 194, pp.290-295.

Li, X. *et al.* 2012. Concordance between antioxidant activities *in vitro* and chemical components of *Radix Astragali* (*Huangqi*). *Natural Product Research*, 26(11), pp.1050-1053. <https://doi.org/10.1080/14786419.2010.551771>.

Liang, R. H., Chen, J., Liu, W., Liu, C. M., Yu, W., Yuan, M. and Zhou, X.Q. 2012. Extraction, characterization and spontaneous gel-forming property of pectin from creeping fig (*Ficus pumila* Linn.) seeds. *Carbohydrate Polymers*, 87(1), pp.76-83.

Libik-Konieczny, M. *et al.* 2021. Synthesis and production of steviol glycosides: recent research trends and perspectives. *Applied Microbiology and Biotechnology*, 105(10), pp.3883-3900.

Lima, M. B. *et al.* 2019. Characterization and influence of hydrocolloids on low caloric orange jellies. *Emirates Journal of Food and Agriculture*, 31(1), pp.7-15. <https://doi.org/10.9755/ejfa.2019.v31.i1.1894>.

Lin, K. Y., Daniel, J. R., and Whistler, R. L. 1994. Structure of chia seed polysaccharide exudate. *Carbohydrate Polymers*, 23(1), pp.13-18.

Liu, J., Wang, X., and Ding, Y. 2013. Optimization of adding konjac glucomannan to improve gel properties of low-quality surimi. *Carbohydrate Polymers*, 92(1), pp.484-489.



- Madaan, R. *et al.* 2020. Formulation and characterization of fast dissolving tablets using *Salvia hispanica* (chia seed) mucilage as superdisintegrant, *Acta Pharmaceutica Sciencia*, 58(1), pp.69-82. <https://doi.org/10.23893/1307-2080.aps.05805>.
- Marcinek, K. and Krejpcio, Z. 2015. *Stevia rebaudiana* Bertoni – chemical composition and functional properties. *Acta Scientiarum Polonorum Technologia Alimentaria*, 14(2), pp.145–152.
- Martínez-Cruz, O., and Paredes-López, O. 2014. Phytochemical profile and nutraceutical potential of chia seeds (*Salvia hispanica L.*) by ultra high performance liquid chromatography. *Journal of Chromatography A*, 1346(1), pp.43-48. <https://doi.org/10.1016/j.chroma.2014.04.007>
- Martirosyan, D. and Pisarski, K. 2017. Bioactive Compounds: Their Role in Functional Food and Human Health, Classifications, and Definitions. In: *Bioactive Compounds and Cancer*. Edited by Danik Martirosyan and Jin-Rong Zhou. San Diego: Food Science Publisher; pp.238-277.
- Mascheroni, R. H. and Salvadori, V. O. 2011. *Household refrigerators and freezers*. In D. W. Sun (Ed.), *Handbook of frozen food processing and packaging (2<sup>nd</sup> ed.)*. Florida: CRC Press, pp.253-272.
- McDowell, L. R. 2008. *Vitamins in animal and human nutrition*. New York: John Wiley & Sons.



Melo, D., Machado, T. B., & Oliveira, M. B. P. 2019. Chia seeds: An ancient grain trending in modern human diets. *Food and Function*, 10(6), pp.3068-3089.

Mente, A., O'Donnell, M., and Yusuf, S. 2021. Sodium Intake and Health: What Should We Recommend Based on the Current Evidence?. *Nutrients*, 13(3232), pp.1-11.

Milani, J. and Maleki, G. 2012. Hydrocolloids in food industry. In: *Food Industrial Processes-Methods and Equipment*. Edited by Benjamin Valdez. London: IntechOpen; pp.2-37.

Mojzer, E.B., et al. 2016. Polyphenols: Extraction Methods, Antioxidative Action, Bioavailability and Anticarcinogenic Effects, *Molecules*, 21(7), pp.1-38.

Montgomery, D. C. 2017. *Design and analysis of experiments (9<sup>th</sup> ed.)*. New Jersey: John Wiley & Sons, Inc.

Morand, C. et al. 2011. Hesperidin contributes to the vascular protective effects of orange juice: a randomized crossover study in healthy volunteers. *The American Journal of Clinical Nutrition*, 93(1), pp.73-80.  
<https://doi.org/10.3945/ajcn.110.004945>.

Mu, R. et al. 2018. Microencapsulation of *Lactobacillus acidophilus* with konjac glucomannan hydrogel. *Food Hydrocolloids*, 76(1), pp.42-48.



Muenprasitivej, N., Tao, R., Nardone, S. J., and Cho, S. 2022. The Effect of Steviol Glycosides on Sensory Properties and Acceptability of Ice Cream. *Foods*, 11(12), pp.1-15.

Muñoz, L. A., Cobos, A., Diaz, O., Aguilera, J. M. 2012. Chia seeds: Microstructure, mucilage extraction and hydration. *Journal of Food Engineering*, 108(1), pp.216-224.

Nogata, Y. et al. 2006. Flavonoid Composition of Fruit Tissues of Citrus Species. *Bioscience, Biotechnology, and Biochemistry*, 70(1), pp.178-192.

Nomura, T., Fukai, T., and Akiyama, T. 2002. Chemistry of phenolic compounds of licorice (*Glycyrrhiza* species) and their estrogenic and cytotoxic activities. *Pure and Applied Chemistry*, 74(7), pp.1199-1206.

Noshe, A. S. and Al-Bayyar, A. H. M. 2017. Effect of extraction method of Chia seeds Oil on its content of fatty acids and antioxidants. *International Research Journal of Engineering and Technology*, 4(10), pp.545-551.

Oliveira-Alves, S. C., Vendramini-Costa, D. B., Betim Cazarin, C. B., Maróstica, M. R., Borges Ferreira, J. P., Silva, A. B., Prado, M. A., & Bronze, M. R. 2017. Characterization of phenolic compounds in chia (*Salvia hispanica* L.) seeds, fiber flour and oil. *Food Chemistry*, 232(1), pp.295-305.

Olivos-Lugo, B. L., Valdivia-López, M. Á., & Tecante, A. 2010. Thermal and physicochemical properties and nutritional value of the protein fraction of



Mexican chia seed (*Salvia hispanica L.*). *Food Science and Technology International*, 16(1), pp.89-96. <https://doi.org/10.1177/1082013209353087>

Padmaningrum, R.T. 2013. *Jelly Production from Fruits*. Yogyakarta: UNY.

Pang *et al.* 2006. Studies on single chain structure of Konjac glucomannan. *Chinese Journal of Structural Chemistry*, 25(12), pp.1441-1448.

Peng, M. *et al.* 2022. Development of Citrus-Based functional jelly and an investigation of its Anti-Obesity and antioxidant properties. *Antioxidants*, 11(12), pp.1-20. <https://doi.org/10.3390/antiox11122418>.

Peteliuk, V. *et al.* 2021. Natural sweetener Stevia rebaudiana: Functionalities, health benefits and potential risks. *EXCLI Journal*, 2021(20), pp.1421-1430. <https://doi.org/10.17179/excli2021-4211>.

Pirsa, S. and Hafezi, K. 2023. Hydrocolloids: Structure, preparation method, and application in food industry. *Food Chemistry*, 399(1), pp.1—14.

Ragain, J. C. 2016. A Review of Color Science in Dentistry: Colorimetry and Color Space. *Journal of Dentistry, Oral Disorders & Therapy*, 4(1), pp.1-5.

Ramos, S. 2008. Cancer chemoprevention and chemotherapy: Dietary polyphenols and signalling pathways. *Molecular Nutrition & Food Research*, 52(5), pp.507-526. <https://doi.org/10.1002/mnfr.200700326>.



Rampersaud, G. C. and Valim, M. F. 2017. 100% citrus juice: nutritional contribution, dietary benefits, and association with anthropometric measures. *Critical Reviews in Food Science and Nutrition*, 57(1), pp.129-140.

Rejeb, I. B., Dhen, N., Kassebi, S., and Gargouri, M. 2020. Quality Evaluation and Functional Properties of Reduced Sugar Jellies Formulated from Citrus Fruits. *Journal of Chemistry*, 2020, pp.1-8.

Repo-Carrasco-Valencia, R., Hellström, J.K., Pihlava, J.-M., and Mattila, P.H. 2010. Flavonoids and other phenolic compounds in Andean indigenous grains: Quinoa (*Chenopodium quinoa*), kañiwa (*Chenopodium pallidicaule*) and kiwicha (*Amaranthus caudatus*). *Food Chemistry*, 120(1), pp.128-133.

Reyes-Caudillo, E., Tecante, A., Valdivia-López, M.A. 2008. Dietary fibre content and antioxidant activity of phenolic compounds present in Mexican chia (*Salvia hispanica L.*) seeds. *Food Chemistry*, 107(2), pp.656-663.

Richa, R. et al. 2023. Citrus fruit: Classification, value addition, nutritional and medicinal values, and relation with pandemic and hidden hunger., *Journal of Agriculture and Food Research*, 14(1), pp.1-13.

Rodrigo, M. J., and Zacarías, L. 2007. Horticultural and quality aspects of citrus fruits'. In. *Handbook of fruits and fruit processing*. Edited by Y.H. Hui.



USA: Blackwell Publishing, pp.293-307. <https://doi.org/10.1002/9780470277737.ch18>.

Rubio-Arraez, S. et al. 2016. Physicochemical characteristics of citrus jelly with non cariogenic and functional sweeteners. *Journal of Food Science and Technology*, 53(10), pp.3642-3650. <https://doi.org/10.1007/s13197-016-2319-4>.

Saha, D. and Bhattacharya, S. 2010. Hydrocolloids as thickening and gelling agents in food: a critical review. *Journal of food science and technology*, 47(6), pp.587-597.

Saini, R. K. and Keum, Y. S. 2018. Omega-3 and omega-6 polyunsaturated fatty acids: Dietary sources, metabolism, and significance—A review. *Life Sciences*, 203(1), pp.255-267. <https://doi.org/10.1016/j.lfs.2018.04.049>

Salgado-Cruz, M., Cedillo-López, D., & Beltrán-Orozco, M. 2005. Estudio de las propiedades funcionales de la semilla de chía (*Salvia hispanica*) y de la fibra dietaria obtenida de la misma. *Proceedings of VII Congreso Nacional De Ciencias De Los Alimentos*, Guanajuato: 12-14 June 2013. pp.358-366.

Scalbert, A. et al. 2005. Dietary polyphenols and the prevention of diseases', *Critical Reviews in Food Science and Nutrition*, 45(4), pp.287-306. <https://doi.org/10.1080/1040869059096>.

Shan, Y. 2015. *Canned Citrus Processing: Techniques, Equipment, and Food Safety*. Academic Press.



Silva, C., Garcia, V. A. S., and Zanette, C.M. 2016. Chia (*Salvia hispanica L.*) oil extraction using different organic solvents: oil yield, fatty acids profile and technological analysis of defatted meal. *International Food Research Journal*, 23(3), pp.998-1004.  
<https://www.cabdirect.org/cabdirect/abstract/20163160829>.

Singh, S. D. and Rao, G. P. 2005. Stevia: The herbal sugar of 21st century. *Sugar Tech*, 7(1), pp.17-24.

Singh, B., Chauhan, G. S., Bhatt, S. S., and Kumar, K. 2006. Metal ion sorption and swelling studies of psyllium and acrylic acid based hydrogels. *Carbohydrate Polymers*, 64(1), pp.50-56.

Siswantoro, J. 2019. Application of Color and Size Measurement in Food Products Inspection. *IJIS—Indonesian Journal of Information Systems*, 1(2), pp.90-107.

Sopyan, I., Gozali, D., Sriwidodo, S., and Guntina, R. K. 2022. Design-Expert Software (Doe): An Application Tool for Optimization in Pharmaceutical Preparations Formulation. *International Journal of Applied Pharmaceutics*, 14(4), pp.55-62.

Sun, J., Jiang, H., Wu, H., Tong, C., Pang, J., and Wu, C. 2020. Multifunctional bionanocomposite films based on konjac glucomannan/chitosan with nano-ZnO and mulberry anthocyanin extract for active food packaging. *Food Hydrocolloids*, 107(105942), pp.1-10.



Suri, S., Singh, A., and Nema, P.K. 2021. Recent advances in valorization of citrus fruits processing waste: a way forward towards environmental sustainability. *Food Science and Biotechnology*, 30(13), pp.1601-1626.

Suryaningsih, S., Muslim, B., and Djali, M. 2020. The antioxidant activity of roselle and dragon fruit peel functional drink in free radical inhibition. *Journal of Physics: Conference Series*, 1836(2021), pp.1-9.

Syam, Y. et al. 2016. Nutrition and pH of trigona honey from Masamba, South Sulawesi, Indonesia. *International Journal of Sciences: Basic and Applied Research*, 27(1), pp.32-36.

Tabrez, S. et al. 2013. Cancer chemoprevention by polyphenols and their potential application as nanomedicine. *Journal of Environmental Science and Health, Part A*, 31(1), pp.67-T98.  
<https://doi.org/10.1080/10590501.2013.763577>.

Teixeria-Lemos, E., Almeida, A. R., Vouga, B., Morais, C., Correia, I., Pereira, P., and Guiné, R. P. F. 2021. Development and characterization of healthy gummy jellies containing natural fruits. *Open Agriculture*, 6(1), pp.466-478.

Toews, I. et al. 2018. Association between intake of non-sugar sweeteners and health outcomes: systematic review and meta-analyses of randomised and non-randomised controlled trials and observational studies. *BMJ*, 364, pp.k4718.



Thailand Ministry of Public Health. 1998. *Notification of the Ministry of Public Health (No. 182) B.E. 2541 Re: Nutrition Labelling*. Thailand: Food and Agriculture Organization (FAO).

Thailand Ministry of Public Health. 2003. *Thailand Food and Drug Administration (Re: Jam, jelly, and marmalade in sealed containers)*. Thailand: Food and Drug Administration.

Thomas, W.R. 1997. Konjac Gum. In: Imeson, A. (Ed.), *Thickening and Gelling Agents for Food*. 2nd Edn., London: Chapman and Hall, pp.169-179.

Ullah, R. et al. 2016. Nutritional and therapeutic perspectives of Chia (*Salvia hispanica L.*): a review. *Journal of Food Science and Technology*, 53(4), pp.1750-1758.

U.S. Department of Agriculture, Agricultural Research Service. 2019. *Oranges, raw, all commercial varieties*. FoodData Central.

U.S. Department of Agriculture, Agricultural Research Service. 2019. *Seeds, chia seeds, dried*. FoodData Central.

Wang, L. et al. 2019. Bioinspired aerogel based on konjac glucomannan and functionalized carbon nanotube for controlled drug release. *International Journal of Biological Macromolecules*, 133(1), pp.693-701.  
<https://doi.org/10.1016/j.ijbiomac.2019.04.148>.

White, Jr., J. R. 2018. Sugar. *Clin Diabetes*, 36(1), pp.74-76.



Yamin, Y. *et al.* 2020. Determination of total phenolic and flavonoid contents of jackfruit peel and in vitro antiradical test, *Food Research*, 5(1), pp.84-90.

[https://doi.org/10.26656/fr.2017.5\(1\).350](https://doi.org/10.26656/fr.2017.5(1).350).

Yang, X. Y., Xie, J. X., Wang, F. F., Zhong, J., Liu, Y. Z., Li, G. H., and Peng, S. A. 2011. Comparison of ascorbate metabolism in fruits of two citrus species with obvious difference in ascorbate content in pulp. *Journal of Plant Physiology*, 168(18), pp.2196-2205.

Ye, S. *et al.* 2021. Konjac Glucomannan (KGM), Deacetylated KGM (DA-KGM), and Degraded KGM derivatives: a special focus on colloidal nutrition. *Journal of Agricultural and Food Chemistry*, 69(44), pp.12921-12932.

<https://doi.org/10.1021/acs.jafc.1c03647>.

Yi, L., Ma, S. and Ren, D. 2017. Phytochemistry and bioactivity of Citrus flavonoids: a focus on antioxidant, anti-inflammatory, anticancer and cardiovascular protection activities. *Phytochemistry Reviews*, 16(3), pp.479-511. <https://doi.org/10.1007/s11101-017-9497-1>.

Yuan, Y. *et al.* (2018). Effects of konjac glucomannan on the structure, properties, and drug release characteristics of agarose hydrogels. *Carbohydrate Polymers*, 190(1), pp.196-203.

<https://doi.org/10.1016/j.carbpol.2018.02.049.10>.



Yuan, C. *et al.* 2019. Gelation of  $\kappa$ -carrageenan/Konjac glucomannan compound

gel: Effect of cyclodextrins. *Food Hydrocolloids*, 87(1), pp.158-164.

<https://doi.org/10.1016/j.foodhyd.2018.07.037>.

Yusof, N., Jaswir, I., Jamal, P., and Jami, M. S. 2019. Texture Profile Analysis (TPA) of the jelly dessert prepared from halal gelatin extracted using High Pressure Processing (HPP). *Malaysian Journal of Fundamental and Applied Sciences*, 15(4), pp.604-608

Zae, T.K. *et al.* 2020. Comparison of selected local honey with manuka honey based on their nutritional and antioxidant properties. *Food Research*, 4(1), pp.205-213.

Zempleni, J., Suttie, J. W., Gregory, J. F., III, & Stover, P. J. (Eds.). 2013. *Handbook of vitamins*. Florida: CRC Press.

Zhou, Y. *et al.* 2018, Morphology evolution and gelation mechanism of alkali induced konjac glucomannan hydrogel. *Food Chemistry*, 269(1), pp.80-88.

Zhou, N. *et al.* (2021). Konjac glucomannan: A review of structure, physicochemical properties, and wound dressing applications. *Journal of Applied Polymer Science*, 139(11), pp.1-16.  
<https://doi.org/10.1002/app.51780>.

Zhu, C.H. *et al.* 2016. Consumption of canned citrus fruit meals increases human plasma  $\beta$ -cryptoxanthin concentration, whereas lycopene and  $\beta$ -carotene



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**Development of Jelly Product Fortified with Chia Seeds (*Salvia hispanica L.*) and Shogun Orange (*Citrus sinensis*) and its Physicochemical and Nutritional Properties**  
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concentrations did not change in healthy adults. *Nutrition Research*, 36(7), pp.679-688.

Zitha, E.Z.M., do Lago, R.C., Carvalho, E.E.N. *et al.* 2021. Changes in the bioactive compounds and antioxidant activity in red-fleshed dragon fruit during its development. *Scientia Horticulturae*, 291(1), pp.1-9.