

DAFTAR PUSTAKA

- Ačkar, Đ., Jozinović, A., Babić, J., Miličević, B., Panak Balentić, J., & Šubarić, D. (2018). Resolving the problem of poor expansion in corn extrudates enriched with food industry by-products. *Innovative Food Science and Emerging Technologies*, 47, 517–524. <https://doi.org/10.1016/j.ifset.2018.05.004>
- Adekunle, A. A., Awonorin, S. O., Sobukola, O. P., Dairo, O. U., & Ogunleye, O. O. (2021). Optimization of processing parameters on the proximate properties of maize and soybean extrudates. In *Croatian Journal of Food Technology* (Vol. 16, Issue 2).
- Agushyvana, F., Pratiwi, A., Laila Kurnia, P., Nandini, N., Santoso, J., & Setyo, A. (2022). Reducing Stunting Prevalence: Causes, Impacts, and Strategies. *BIO Web of Conferences*, 54, 00009. <https://doi.org/10.1051/bioconf/20225400009>
- Ajita, T., & Jha, S. K. (2017). Extrusion cooking technology: Principal mechanism and effect on direct expanded snacks - An overview. *International Journal of Food Studies*, 6(1), 113–128. <https://doi.org/10.7455/ijfs/6.1.2017.a10>
- Akhtar, J., Malik, S., & Alam, M. A. (2015). Extrusion Technology used for novel Foods Production 1. © 2015 *IJEDR* |, 3(3). www.ijedr.org
- Alam, M. S., Kaur, J., Khaira, H., & Gupta, K. (2016a). Extrusion and Extruded Products: Changes in Quality Attributes as Affected by Extrusion Process Parameters: A Review. *Critical Reviews in Food Science and Nutrition*, 56(3), 445–473. <https://doi.org/10.1080/10408398.2013.779568>
- Alam, M. S., Pathania, S., & Sharma, A. (2016b). Optimization of the extrusion process for development of high fibre soybean-rice ready-to-eat snacks using carrot pomace and cauliflower trimmings. *LWT*, 74, 135–144. <https://doi.org/10.1016/j.lwt.2016.07.031>
- Al-Rabadi, G. J., Torley, P. J., Williams, B. A., Bryden, W. L., & Gidley, M. J. (2011). Particle size of milled barley and sorghum and physico-chemical properties of grain following extrusion. *Journal of Food Engineering*, 103(4), 464–472. <https://doi.org/10.1016/j.jfoodeng.2010.11.016>
- Altan, A., & Maskan, M. (2016). *6 Development of Extruded Foods by Utilizing Food Industry By-Products*.
- Aluwi, N. A., Gu, B. J., Dhupal, G. S., Medina-Meza, I. G., Murphy, K. M., & Ganjyal, G. M. (2016). Impacts of Scarification and Degermination on the Expansion Characteristics of Select Quinoa Varieties during Extrusion

Processing. *Journal of Food Science*, 81(12), E2939–E2949.
<https://doi.org/10.1111/1750-3841.13512>

Ambarsari, I., Dewi Anomsari, & N. Oktaningrum Gama. (2015). *tepungjagung*.

Anderson, R. A., Conway, H. F., & Peplinski, A. I. (1970). *Gelatinization of Corn Grits by Roll Cooking, Extrusion Cooking and Steaming*.

Anton, A. A., Gary Fulcher, R., & Arntfield, S. D. (2009). Physical and nutritional impact of fortification of corn starch-based extruded snacks with common bean (*Phaseolus vulgaris* L.) flour: Effects of bean addition and extrusion cooking. *Food Chemistry*, 113(4), 989–996.
<https://doi.org/10.1016/j.foodchem.2008.08.050>

ASABE. (2006). *S T A N D A R D ANSI/ASAE S319.3 FEB03 Method of Determining and Expressing Fineness of Feed Materials by Sieving*.

Badan Standardisasi Nasional. (2015). *Makanan ringan ekstrudat*. www.bsn.go.id diakses pada tanggal 23 Maret 2023.

Bayu, D.J. 2021. *Pandemi Membuat Masyarakat Lebih Sering Makan Camilan*. <https://databoks.katadata.co.id/datapublish/2021/01/20/pandemi-membuat-masyarakat-lebih-sering-makan-camilan> . Diakses pada tanggal 2 Februari 2023.

Beakawi Al-Hashemi, H. M., & Baghabra Al-Amoudi, O. S. (2018). A review on the angle of repose of granular materials. In *Powder Technology* (Vol. 330, pp. 397–417). Elsevier B.V. <https://doi.org/10.1016/j.powtec.2018.02.003>

Beck, S. M., Knoerzer, K., Foerster, M., Mayo, S., Philipp, C., & Arcot, J. (2018). Low moisture extrusion of pea protein and pea fibre fortified rice starch blends. *Journal of Food Engineering*, 231, 61–71.
<https://doi.org/10.1016/j.jfoodeng.2018.03.004>

Berk, Z. (2009). *Food Process Engineering and Technology*. Food Science and Technology International Series.

Bisharat, G. I., Oikonomopoulou, V. P., Panagiotou, N. M., Krokida, M. K., & Maroulis, Z. B. (2013). Effect of extrusion conditions on the structural properties of corn extrudates enriched with dehydrated vegetables. *Food Research International*, 53(1), 1–14.
<https://doi.org/10.1016/j.foodres.2013.03.043>

Boluk, I., Kumcuoglu, S., & Tavman, S. (2023). Development, Characterization and Sensory Evaluation of an Extruded Snack Using Fig Molasses By-Product and Corn Semolina. *Foods*, 12(5). <https://doi.org/10.3390/foods12051029>

- Bordoloi, R., & Ganguly, S. (2014). *EXTRUSION TECHNIQUE IN FOOD PROCESSING AND A REVIEW ON ITS VARIOUS TECHNOLOGICAL PARAMETERS*. <http://www.indjsrt.com>
- Brennan, M. A., Derbyshire, E., Tiwari, B. K., & Brennan, C. S. (2013). Ready-to-eat snack products: The role of extrusion technology in developing consumer acceptable and nutritious snacks. In *International Journal of Food Science and Technology* (Vol. 48, Issue 5, pp. 893–902). <https://doi.org/10.1111/ijfs.12055>
- Brunatti, A. C. S., Garcia, E. L., Mischán, M. M., & Leonel, M. (2018). Gluten-free puffed snacks of rice and cassava. *Australian Journal of Crop Science*, *12*(2), 185–192. <https://doi.org/10.21475/ajcs.18.12.02.pne477>
- Budijanto, S., Sitanggang, A. B., Wiaranti, H., & Koesbiantoro, D. B. (2012). PENGEMBANGAN TEKNOLOGI SEREAL SARAPAN BEKATUL DENGAN MENGGUNAKAN TWIN SCREW EXTRUDER. In *J. Pascapanen* (Vol. 9, Issue 2).
- Caltinoglu, C., Tonyali, B., & Sensoy, I. (2014). Effects of tomato pulp addition on the extrudate quality parameters and effects of extrusion on the functional parameters of the extrudates. *International Journal of Food Science and Technology*, *49*(2), 587–594. <https://doi.org/10.1111/ijfs.12341>
- Carvalho, C. W. P., Takeiti, C. Y., Onwulata, C. I., & Pordesimo, L. O. (2010). Relative effect of particle size on the physical properties of corn meal extrudates: Effect of particle size on the extrusion of corn meal. *Journal of Food Engineering*, *98*(1), 103–109. <https://doi.org/10.1016/j.jfoodeng.2009.12.015>
- Charunuch, C., Limsangouan, N., Prasert, W., & Butsuwan, P. (2011). Optimization of Extrusion Conditions for Functional Ready-to-Eat Breakfast Cereal. In *Food Sci. Technol. Res* (Vol. 17, Issue 5).
- Chen, F. L., Wei, Y. M., Zhang, B., & Ojokoh, A. O. (2010). System parameters and product properties response of soybean protein extruded at wide moisture range. *Journal of Food Engineering*, *96*(2), 208–213. <https://doi.org/10.1016/j.jfoodeng.2009.07.014>
- Choton, S., Gupta, N., Bandral, J. D., Anjum, N., & Choudary, A. (2020). Extrusion technology and its application in food processing: A review. *The Pharma Innovation*, *9*(2), 162–168. <https://doi.org/10.22271/tpi.2020.v9.i2d.4367>
- Chou, C. F., & Hsu, S. C. (2021). Effects of extrusion parameters on the physicochemical characteristics of extruded barley ready-to-eat snacks. *Journal of Food Processing and Preservation*, *45*(10). <https://doi.org/10.1111/jfpp.15788>

- Costa, C., Antonucci, F., Pallottino, F., Aguzzi, J., Sun, D. W., & Menesatti, P. (2011). Shape Analysis of Agricultural Products: A Review of Recent Research Advances and Potential Application to Computer Vision. In *Food and Bioprocess Technology* (Vol. 4, Issue 5, pp. 673–692). <https://doi.org/10.1007/s11947-011-0556-0>
- Dalbhat, C. G., Mahato, D. K., & Mishra, H. N. (2019). Effect of extrusion processing on physicochemical, functional and nutritional characteristics of rice and rice-based products: A review. In *Trends in Food Science and Technology* (Vol. 85, pp. 226–240). Elsevier Ltd. <https://doi.org/10.1016/j.tifs.2019.01.001>
- Day, L., & Swanson, B. G. (2013). Functionality of protein-fortified extrudates. *Comprehensive Reviews in Food Science and Food Safety*, 12(5), 546–564. <https://doi.org/10.1111/1541-4337.12023>
- Dehghan-Shoar, Z., Hardacre, A. K., & Brennan, C. S. (2010). The physico-chemical characteristics of extruded snacks enriched with tomato lycopene. *Food Chemistry*, 123(4), 1117–1122. <https://doi.org/10.1016/j.foodchem.2010.05.071>
- Deshpande, H. W., & Achinna, P. (2011). Physical and sensory characteristics of extruded snacks prepared from Foxtail millet based composite flours Value addition to Millets View project Traditional foods of Tribes in Adilabad district View project. In *Article in International Food Research Journal*. <https://www.researchgate.net/publication/289102152>
- Ding, Q. B., Ainsworth, P., Tucker, G., & Marson, H. (2005). The effect of extrusion conditions on the physicochemical properties and sensory characteristics of rice-based expanded snacks. *Journal of Food Engineering*, 66(3), 283–289. <https://doi.org/10.1016/j.jfoodeng.2004.03.019>
- Falcone, R. G., & Dixon Phillips, R. (1988). *Effects of Feed Composition, Feed Moisture, and Barrel Temperature on the Physical and Rheological Properties of Snack-like Products Prepared from Cowpea and Sorghum Flours by Extrusion*.
- Filli, Nkama, I., Jideani, V. A., & Ibok, I. U. (2012). System Parameters and Product Properties Responses During Extrusion of Fura from Millet-Soybean Mixtures. In *Nigerian Food Journal Official Journal of Nigerian Institute of Food Science and Technology www.nifst.org NIFOJ* (Vol. 30, Issue 1). www.nifst.org
- Filli, K. B., Nkama, I., Adamu Abubakar, U., & Jideani, V. (2010). *Influence of extrusion variables on some functional properties of extruded millet-soybean for the manufacture of “fura”*: A Nigerian traditional food Biopolymer

extrusion View project Utilization of cereal grains and grain legumes in processing of foods of Nigerian origin View project.
<http://www.academicjournals.org/ajfs>

- Fleischman, E. F., Kowalski, R. J., Morris, C. F., Nguyen, T., Li, C., Ganjyal, G., & Ross, C. F. (2016). Physical, Textural, and Antioxidant Properties of Extruded Waxy Wheat Flour Snack Supplemented with Several Varieties of Bran. *Journal of Food Science*, 81(11), E2726–E2733. <https://doi.org/10.1111/1750-3841.13511>
- Giannini, A. N., Krokida, M. K., & Bisharat, G. I. (2013). Structural properties of corn-based extrudates enriched with plant fibers. *International Journal of Food Properties*, 16(3), 667–683. <https://doi.org/10.1080/10942912.2011.565536>
- Gozalli, M., Nurhayati, & Nafi, A. (2015). Karakteristik Tepung Kedelai dari Jenis Impor dan Lokal (Varietas Anjasmoro Baluran) dengan Perlakuan Perlakuan dan Tanpa Perebusan. *Jurnal Agroteknologi*, 09(02), 191–199.
- Gu, B.-J., & Kowalski, R. J. (2017). *Food Extrusion Processing: An Overview Food Extrusion Processing: An Overview Summary*. Washington State University.
- Guzmán-Ortiz, F. A., Hernández-Sánchez, H., Yee-Madeira, H., Martín-Martínez, E. S., Robles-Ramírez, M. del C., Rojas-López, M., Berríos, J. D. J., & Mora-Escobedo, R. (2015). Physico-chemical, nutritional and infrared spectroscopy evaluation of an optimized soybean/corn flour extrudate. *Journal of Food Science and Technology*, 52(7), 4066–4077. <https://doi.org/10.1007/s13197-014-1485-5>
- Hess, J. M., Jonnalagadda, S. S., & Slavin, J. L. (2016). What is a snack, why do we snack, and how can we choose better snacks? A review of the definitions of snacking, motivations to snack, contributions to dietary intake, and recommendations for improvement. In *Advances in Nutrition* (Vol. 7, Issue 3, pp. 466–475). American Society for Nutrition. <https://doi.org/10.3945/an.115.009571>
- Hood-Niefer, S. D., & Tyler, R. T. (2010). Effect of protein, moisture content and barrel temperature on the physicochemical characteristics of pea flour extrudates. *Food Research International*, 43(2), 659–663. <https://doi.org/10.1016/j.foodres.2009.09.033>
- J Berrios, J. DE, Wood, D. F., Whitehand, L., Pan, J., Irving, D. W. (2004). Sodium Bicarbonat and The Microstructure, Expansion and Color of Extruded Black Beans. In *Journal of Food Processing and Preservation* (Vol. 28).
- Jabeen, Hassan, Masoodi, Ajaz, & Rafiq. (2017). Physico-Chemical Composition and Functional Properties of Blended Flour Obtained from Lentil, Pumpkin

- and Barley for Development of Extrudates. *Journal of Food Processing & Technology*, 09(01). <https://doi.org/10.4172/2157-7110.1000713>
- Kaisangsri, N., Kowalski, R. J., Wijesekara, I., Kerdchoechuen, O., Laohakunjit, N., & Ganjyal, G. M. (2016). Carrot pomace enhances the expansion and nutritional quality of corn starch extrudates. *LWT*, 68, 391–399. <https://doi.org/10.1016/j.lwt.2015.12.016>
- Kanojia, V., Singh, M., Khandelwal, B. M., & Azam, M. (2016). Effect of single screw extrusion parameters on textural properties of rice based expanded snacks enriched with okara. *Indian Journal of Science and Technology*, 9(22). <https://doi.org/10.17485/ijst/2016/v9i22/88437>
- Kementerian Kesehatan Republik Indonesia. 2023. *Prevalensi stunting di Indonesia turun dari 24,4% di tahun 2021 menjadi 21,6% di 2022*. <https://www.kemkes.go.id/index.php?txtKeyword=stunting+2022&act=search-action&pgnumber=0&charindex=&strucid=&fullcontent=&C-ALL=1&C1=1&C2=1&C3=1&C4=1&C5=1>. Diakses pada tanggal 16 April 2023.
- Kementerian Pertanian Republik Indonesia. 2020. Outlook Kedelai Komoditas Pertanian Subsektor Tanaman Pangan. Pusat Data dan Sistem Informasi Pertanian Kementerian Pertanian. https://satudata.pertanian.go.id/assets/docs/publikasi/OUTLOOK_KEDELAI_2020.pdf. Diakses pada tanggal 25 Mei 2023.
- Korkerd, S., Wanlapa, S., Puttanlek, C., Uttapap, D., & Rungsardthong, V. (2016). Expansion and functional properties of extruded snacks enriched with nutrition sources from food processing by-products. *Journal of Food Science and Technology*, 53(1), 561–570. <https://doi.org/10.1007/s13197-015-2039-1>
- Lakshmi Devi, N., Shobha, S., Alavi, S., Kalpana, K., & Soumya, M. (2014). Utilization of extrusion technology for the development of millet based complementary foods. *Journal of Food Science and Technology*, 51(10), 2845–2850. <https://doi.org/10.1007/s13197-012-0789-6>
- Lazou, A. E. (2022). Food extrusion: An advanced process for innovation and novel product development. In *Critical Reviews in Food Science and Nutrition*. Taylor and Francis Ltd. <https://doi.org/10.1080/10408398.2022.2143474>
- Li, T., Peng, Y., Zhu, Z., Yu, Z., & Yin, Z. (2017). Effect of the Lifting Velocity and Container Shape on Angle of Repose of Iron Ore Particles. *Advances in Materials Science and Engineering*, 2017. <https://doi.org/10.1155/2017/3405432>
- Li, X., Zhang, T., An, Y., Yin, T., Xiong, S., & Rong, H. (2022). Physicochemical Characteristics and Flavor Properties of Texturized Dual-Proteins Extrudates:

- Effect of Surimi to Soybean Flour Ratio. *Foods*, 11(22). <https://doi.org/10.3390/foods11223640>
- Liu, C., Zhang, Y., Liu, W., Wan, J., Wang, W., Wu, L., Zuo, N., Zhou, Y., & Yin, Z. (2011). Preparation, physicochemical and texture properties of texturized rice produce by Improved Extrusion Cooking Technology. *Journal of Cereal Science*, 54(3), 473–480. <https://doi.org/10.1016/j.jcs.2011.09.001>
- Lotfi Shirazi, S., Koocheki, A., Milani, E., & Mohebbi, M. (2020). Production of high fiber ready-to-eat expanded snack from barley flour and carrot pomace using extrusion cooking technology. *Journal of Food Science and Technology*, 57(6), 2169–2181. <https://doi.org/10.1007/s13197-020-04252-5>
- Makowska, A., Mildner-Szkudlarz, S., & Obuchowski, W. (2013). Effect of brewer's spent grain addition on properties of corn extrudates with an increased dietary fibre content. *Polish Journal of Food and Nutrition Sciences*, 63(1), 19–24. <https://doi.org/10.2478/v10222-012-0061-9>
- Maurya, A. K., & Said, P. P. (2014). Extrusion Processing on Physical and Chemical Properties of Protein Rich Products-An Overview. In *Journal of Bioresource Engineering and Technology*. www.jakraya.com/journal/jbet
- Mayachiew, P., Charunuch, C., & Devahastin, S. (2015). Physicochemical and thermal properties of extruded instant functional rice porridge powder as affected by the addition of soybean or mung bean. *Journal of Food Science*, 80(12), E2782–E2791. <https://doi.org/10.1111/1750-3841.13118>
- Mazlan, M. M., Talib, R. A., Mail, N. F., Taip, F. S., Chin, N. L., Sulaiman, R., Shukri, R., & Mohd Nor, M. Z. (2019). Effects of extrusion variables on corn-mango peel extrudates properties, torque and moisture loss. *International Journal of Food Properties*, 22(1), 54–70. <https://doi.org/10.1080/10942912.2019.1568458>
- Meng, X., Threinen, D., Hansen, M., & Driedger, D. (2010). Effects of extrusion conditions on system parameters and physical properties of a chickpea flour-based snack. *Food Research International*, 43(2), 650–658. <https://doi.org/10.1016/j.foodres.2009.07.016>
- Menis, M. E. C., Milani, T. M. G., Jordano, A., Boscolo, M., & Conti-Silva, A. C. (2013). Extrusion of flavored corn grits: Structural characteristics, volatile compounds retention and sensory acceptability. *LWT*, 54(2), 434–439. <https://doi.org/10.1016/j.lwt.2013.06.021>
- Meza, S. L. R., Sinnecker, P., Schmiele, M., Massaretto, I. L., Chang, Y. K., & Marquez, U. M. L. (2019). Production of innovative gluten-free breakfast cereals based on red and black rice by extrusion processing technology.

Journal of Food Science and Technology, 56(11), 4855–4866.
<https://doi.org/10.1007/s13197-019-03951-y>

Mizutani, Y., Shibata, M., Yamada, S., Nambu, Y., Hirotsuka, M., & Matsumura, Y. (2019). Effects of heat treatment under low moisture conditions on the protein and oil in soybean seeds. *Food Chemistry*, 275, 577–584.
<https://doi.org/10.1016/j.foodchem.2018.09.139>

Nagaraju, Tiwari, V. K., & Sharma, A. (2020). Effect of extrusion on physical and functional properties of millet based extrudates: A review. *Journal of Pharmacognosy and Phytochemistry*, 9(6), 1850–1854.
<https://doi.org/10.22271/phyto.2020.v9.i6aa.13216>

Nakhon, P., Jangchud, K., Jangchud, A., & Charunuch, C. (2018). Optimization of pumpkin and feed moisture content to produce healthy pumpkin-germinated brown rice extruded snacks. *Agriculture and Natural Resources*, 52(6), 550–556. <https://doi.org/10.1016/j.anres.2018.11.018>

Navale, S. A., Thakor, N. J., & Swami, S. B. (n.d.). Issue 3 | Pages 66-80 Balasaheb Sawant Konkan Krishi Vidyapeeth. In *Journal of Ready to Eat Food* (Vol. 2). www.jakraya.com/journal/jref

Nayak, B., Berrios, J. D. J., Powers, J. R., & Tang, J. (2011). Effect of Extrusion on the Antioxidant Capacity and Color Attributes of Expanded Extrudates Prepared from Purple Potato and Yellow Pea Flour Mixes. *Journal of Food Science*, 76(6). <https://doi.org/10.1111/j.1750-3841.2011.02279.x>

Nazir, F., Naik, H. R., & Hussain, S. Z. (2016). Effect of extrusion conditions and apricot powder incorporation on colour parameters of rice based breakfast snacks. *Biosciences Biotechnology Research Asia*, 13(3), 1673–1678.
<https://doi.org/10.13005/bbra/2316>

Offiah, V., Kontogiorgos, V., & Falade, K. O. (2019). Extrusion processing of raw food materials and by-products: A review. In *Critical Reviews in Food Science and Nutrition* (Vol. 59, Issue 18, pp. 2979–2998). Taylor and Francis Inc.
<https://doi.org/10.1080/10408398.2018.1480007>

Oikonomou, N. A., & Krokida, M. K. (2011). Literature data compilation of WAI and WSI of extrudate food products. *International Journal of Food Properties*, 14(1), 199–240. <https://doi.org/10.1080/10942910903160422>

Ojokoh, A. O., Yimin, W., & Eromosele, O. S. (2015). Effect of some extrusion variables on fermented maize-soybean blend. *Journal of Food Science and Technology*, 52(9), 5763–5771. <https://doi.org/10.1007/s13197-014-1689-8>

Oladeji, A. E., Bussie, M.-D., Ibrinke, P., Therese, G., & David, C. (2016). Nutritional Evaluation and Consumer Preference of Legume Fortified Maize-

- meal Porridge. *Journal of Food and Nutrition Research*, 4(10), 664–670. <https://doi.org/10.12691/jfnr-4-10-6>
- Oluwole, B. O., & Olapade, A. A. (2011). Effect of Extrusion Cooking of White Yam (<i>Dioscorea rotundata</i>) and Bambara-Nut (<i>Vigna subterranean</i>) Blend on Some Selected Extrudate Parameters. *Food and Nutrition Sciences*, 02(06), 599–605. <https://doi.org/10.4236/fns.2011.26084>
- Otto, V. (2008). Fundamentals_of_Extrusion. *CANDY INDUSTRY*, 173(1), 56–65.
- Pardhi, S. D., Singh, B., Nayik, G. A., & Dar, B. N. (2019). Evaluation of functional properties of extruded snacks developed from brown rice grits by using response surface methodology. *Journal of the Saudi Society of Agricultural Sciences*, 18(1), 7–16. <https://doi.org/10.1016/j.jssas.2016.11.006>
- Park, S. H., Lamsal, B. P., & Balasubramaniam, V. M. (2014). *Principles of Food Processing*. www.ers.usda.gov/topics/food-markets-prices/processing-
- Pasqualone, A., Costantini, M., Coldea, T. E., & Summo, C. (2020). Use of Legumes in Extrusion Cooking: A Review. In *Foods* (Vol. 9, Issue 7). MDPI Multidisciplinary Digital Publishing Institute. <https://doi.org/10.3390/foods9070958>
- Pathare, P. B., Opara, U. L., & Al-Said, F. A. J. (2013). Colour Measurement and Analysis in Fresh and Processed Foods: A Review. In *Food and Bioprocess Technology* (Vol. 6, Issue 1, pp. 36–60). Springer Science and Business Media, LLC. <https://doi.org/10.1007/s11947-012-0867-9>
- Paul Singh, R., & Heldman, D. R. (2009). *Introduction to Food Engineering, Fourth Edition*.
- Putri, D.T. P. (2022). *Karakteristik Fisik dan Kimia Ekstrudat Berbahan Dasar Grit Jagung dan Tepung Gaplek dengan Perlakuan Komposisi dan Kadar Air Awal Bahan*. Skripsi. Fakultas Teknologi Pertanian. Universitas Gadjah Mada. Yogyakarta. Diakses pada <https://lib.ugm.ac.id/> tanggal 26 Juni 2023.
- Riaz, M. N. (2019). Food extruders. In *Handbook of Farm, Dairy and Food Machinery Engineering* (pp. 483–497). Elsevier. <https://doi.org/10.1016/B978-0-12-814803-7.00019-1>
- Rizzo, G., & Baroni, L. (2018). Soy, soy foods and their role in vegetarian diets. In *Nutrients* (Vol. 10, Issue 1). MDPI AG. <https://doi.org/10.3390/nu10010043>
- Rweyemamu, M. L., Yusuph, A., & Mrema, G. D. (2015). Physical properties of extruded snacks enriched with soybean and moringa leaf powder. *African Journal of Food Science and Technology*, 06(01). <https://doi.org/10.14303/ajfst.2015.010>

- Saeleaw, M., Dürschmid, K., & Schleining, G. (2012). The effect of extrusion conditions on mechanical-sound and sensory evaluation of rye expanded snack. *Journal of Food Engineering*, 110(4), 532–540. <https://doi.org/10.1016/j.jfoodeng.2012.01.002>
- Sahu, C., Patel, S., & Tripathi, A. K. (2022). Effect of extrusion parameters on physical and functional quality of soy protein enriched maize based extruded snack. *Applied Food Research*, 2(1). <https://doi.org/10.1016/j.afres.2022.100072>
- Samuelsen, T. A., Oterhals, & Kousoulaki, K. (2018). High lipid microalgae (*Schizochytrium* sp.) inclusion as a sustainable source of n-3 long-chain PUFA in fish feed—Effects on the extrusion process and physical pellet quality. *Animal Feed Science and Technology*, 236, 14–28. <https://doi.org/10.1016/j.anifeedsci.2017.11.020>
- Selani, M. M., Brazaca, S. G. C., Dos Santos Dias, C. T., Ratnayake, W. S., Flores, R. A., & Bianchini, A. (2014). Characterisation and potential application of pineapple pomace in an extruded product for fibre enhancement. *Food Chemistry*, 163, 23–30. <https://doi.org/10.1016/j.foodchem.2014.04.076>
- Setiabudi, F. S., Hariyadi, P., & Syah, D. (2013). *Teknologi Proses Ekstrusi untuk Membuat Beras Analog Extrusion Process Technology of Analog Rice*.
- Sharifi, S., Majzoobi, M., & Farahnaky, A. (2021). Effects of particle size and moisture content of maize grits on physical properties of expanded snacks. *Journal of Texture Studies*, 52(1), 110–123. <https://doi.org/10.1111/jtxs.12565>
- Shevkani, K., Singh, N., Rattan, B., Singh, J. P., Kaur, A., & Singh, B. (2019). Effect of chickpea and spinach on extrusion behavior of corn grit. *Journal of Food Science and Technology*, 56(4), 2257–2266. <https://doi.org/10.1007/s13197-019-03712-x>
- Siddiq, M., Kelkar, S., Harte, J. B., Dolan, K. D., & Nyombaire, G. (2013). Functional properties of flour from low-temperature extruded navy and pinto beans (*Phaseolus vulgaris* L.). *LWT*, 50(1), 215–219. <https://doi.org/10.1016/j.lwt.2012.05.024>
- Singh, B., Sharma, C., & Sharma, S. (2017). *Fundamentals of Extrusion Processing*. Candy Industry.
- Singh, J. P., Kaur, A., Shevkani, K., Singh, N., & Singh, B. (2016). Physicochemical characterisation of corn extrudates prepared with varying levels of beetroot (*Beta vulgaris*) at different extrusion temperatures. *International Journal of Food Science and Technology*, 51(4), 911–919. <https://doi.org/10.1111/ijfs.13051>

- Singh, S. K., & Muthukumarappan, K. (2016). Effect of feed moisture, extrusion temperature and screw speed on properties of soy white flakes based aquafeed: A response surface analysis. *Journal of the Science of Food and Agriculture*, 96(6), 2220–2229. <https://doi.org/10.1002/jsfa.7339>
- Singha, P., Singh, S. K., Muthukumarappan, K., & Krishnan, P. (2018). Physicochemical and nutritional properties of extrudates from food grade distiller's dried grains, garbanzo flour, and corn grits. *Food Science and Nutrition*, 6(7), 1914–1926. <https://doi.org/10.1002/fsn3.769>
- Sun, Y., & Muthukumarappan, K. (2002). Changes in functionality of soy-based extrudates during single-screw extrusion processing. *International Journal of Food Properties*, 5(2), 379–389. <https://doi.org/10.1081/JFP-120005793>
- Tang, H. K., Lui, W. B., & Peng, J. (2014a). Optimization of Extrusion Conditions for GABA Tea Powder/Corn Grit Blend Extrudates. *Journal of Food Processing and Preservation*, 38(5), 2108–2116. <https://doi.org/10.1111/jfpp.12191>
- Tang, H. K., Lui, W. B., & Peng, J. (2014b). Optimization of Extrusion Conditions for GABA Tea Powder/Corn Grit Blend Extrudates. *Journal of Food Processing and Preservation*, 38(5), 2108–2116. <https://doi.org/10.1111/jfpp.12191>
- Thakur, S., Singh, N., Kaur, A., & Singh, B. (2017). Effect of Extrusion on Physicochemical Properties, Digestibility, and Phenolic Profiles of Grit Fractions Obtained from Dry Milling of Normal and Waxy Corn. *Journal of Food Science*, 82(5), 1101–1109. <https://doi.org/10.1111/1750-3841.13692>
- Unsaeng, K., Hannanta-Anan, P., & Phongpipatpong, M. (2019). Effects of extrusion variables on extrudate characteristics from corn-based enriched with soybean residue. *IOP Conference Series: Earth and Environmental Science*, 301(1). <https://doi.org/10.1088/1755-1315/301/1/012057>
- Varsha, K., & Mohan, S. (2016). Extruded Product Quality Assessment Indices: A Review. *International Journal of Agriculture Sciences*, 8, 2928–2934. <http://www.bioinfopublication.org/jouarchive.php?opt=&jouid=BPJ0000217>.
- World Health Organization. (2022). *Reducing stunting in children: equity considerations for achieving the global targets 2025*. <https://www.who.int/publications/i/item/9789241513647>. Diakses pada tanggal 24 Mei 2023.
- Wang, Y. Y., & Ryu, G. H. (2013). Physicochemical and antioxidant properties of extruded corn grits with corn fiber by CO₂ injection extrusion process. *Journal of Cereal Science*, 58(1), 110–116. <https://doi.org/10.1016/j.jcs.2013.03.013>

- Xu, E., Wu, Z., Pan, X., Long, J., Wang, F., Xu, X., Jin, Z., & Jiao, A. (2016). Effect of enzymatic (thermostable α -amylase) treatment on the physicochemical and antioxidant properties of extruded rice incorporated with soybean flour. *Food Chemistry*, *197*, 114–123. <https://doi.org/10.1016/j.foodchem.2015.10.109>
- Yao, N., White, P. J., & Alavi, S. (2011). Impact of β -glucan and other oat flour components on physico-chemical and sensory properties of extruded oat cereals. *International Journal of Food Science and Technology*, *46*(3), 651–660. <https://doi.org/10.1111/j.1365-2621.2010.02535.x>
- Yenrina, R., Yuliana, & Muchtadi, D. (2006). PENGOLAHAN DAN PENERIMAAN PRODUK KEDELAI PADA RUMAHTANGGA. *Jurnal Gizi Dan Pangan*, *1*(1), 36–43.
- Yu, L., Ramaswamy, H. S., & Boye, J. (2012). Twin-screw Extrusion of Corn Flour and Soy Protein Isolate (SPI) Blends: A Response Surface Analysis. *Food and Bioprocess Technology*, *5*(2), 485–497. <https://doi.org/10.1007/s11947-009-0294-8>
- Yu, L., Ramaswamy, H. S., & Boye, J. (2013). Protein rich extruded products prepared from soy protein isolate-corn flour blends. *LWT*, *50*(1), 279–289. <https://doi.org/10.1016/j.lwt.2012.05.012>
- Yusuf, M., Halilu, M., & Filli, K. (2018). Influence of Extrusion Variables on Proximate Composition Some Nutrient and Antinutrient Contents of Dakuwa Extrudates Produced from Blends of Sorghum (*Sorghum bicolor* L) Groundnut (*Arachis hypogea* L) and Tigernut (*Cyperus esculentus*). *Current Journal of Applied Science and Technology*, *26*(4), 1–20. <https://doi.org/10.9734/cjast/2018/40037>
- Zhang, G., Ni, C., Ding, Y., Zhou, H., Caizhi, O., Wang, Q., Wang, J., & Cheng, J. (2020). Effects of Low Moisture Extrusion on the Structural and Physicochemical Properties of Adlay (*Coix lacryma-jobi* L.) Starch-Based Polymers. *Process Biochemistry*, *96*, 30–37. <https://doi.org/10.1016/j.procbio.2020.05.028>
- Zhang, Y., Zhang, J., Chen, Q., He, N., & Wang, Q. (2022). High-Moisture Extrusion of Mixed Proteins from Soy and Surimi: Effect of Protein Gelling Properties on the Product Quality. *Foods*, *11*(10). <https://doi.org/10.3390/foods11101397>
- Zheng, H., Yan, G. Sen, Lee, Y., Alcaraz, C., Marquez, S., & de Mejia, E. G. (2020). Effect of the extrusion process on allergen reduction and the texture change of soybean protein isolate-corn and soybean flour-corn mixtures. *Innovative Food Science and Emerging Technologies*, *64*. <https://doi.org/10.1016/j.ifset.2020.102421>