DAFTAR PUSTAKA

Aguilera-Velázquez, J.R., Calleja, A., Moreno, I., Bautista, J., and Alonso, E., 2023, Metal Profiles and Health Risk Assessment of The Most Consumed Rice Varieties in Spain, *J. Food Compos. Anal.*, 117, 1-10.

Al Chami, Z., Amer, N., Al Bitar, L., and Cavoski, I., 2015, Potential Use of *Sorghum Bicolor* and *Carthamus Tinctorius* in Phytoremediation of Nickel, Lead and Zinc, *Int. J. Environ. Sci. Technol.*, 12, 3957-3970.

Alamu, E.O., Gondwe, T., Akello, J., Sakala, N., Munthali, G., Mukanga, M., and Maziya-Dixon, B., 2018, Nutrient and Aflatoxin Contents of Traditional Complementary Foods Consumed by Children of 6-24 Months, *Food Sci. Nutr.*, 6, 834-842.

Al-Harbi, H.F., Al-Mohaimeed, A.M., El-Tohamy, M.F., 2023, Assesment of Essential Elements and Heavy Metals in Saudi Arabian Rice Samples Underwent Various Processing Methods, *Open Chem. J.*, 21, 1-12.

Al-Naimi, M., and Al-Ghouti, M.A., 2020, Effects of Soaking, Acidity and Temperature on Cadmium and Lead Removal from Rice, *Food Chem.*, 310, 1-10.

Alsarem, A.H., Elhassan, S.A.A., and Hassan, E.A., 2016, Determination of The Extent of Contamination of Sorghum by Heavy Metals in Yemen Republic, *Eur. Acad. Res.*, 4(3), 2773-2783.

Asropi, A., Bintoro, N., Karyadi, J.N.W., Rahayoe, S., and Saputro, A.D., 2019, Kinetika Perubahan Sifat Fisik dan Kadar Tanin Biji Sorgum (*Sorghum Bicolor L.*) Selama Perendaman, *agriTECH*, 39, 222-233.

Balali-Mood, M., Naseri, K., Tahergorabi, Z., Khazdair, M.R., and Sadeghi, M., 2021, Toxic Mechanisms of Five Heavy Metals: Mercury, Lead, Chromium, Cadmium, and Arsenic, *Front. Pharmacol.*, 12, 1-10.

Balaram, V., Copia, L., Kumar, U.S., Miller, J., and Chidambaram, S., 2023, Pollution of Water Resources and Application of ICP-MS Techniques for Monitoring and Management, *Geosyst. Geoenviron.*, 2(4), 1-24.

Bohn, L., Meyer, A.S., and Rasmussen, S.K., 2008, Phytate: Impact on Environment and Human Nutrition A Challenge for Molecular Breeding, *J. Zhejiang Univ. Sci. B.*, 9(3), 165-191.

Botha, N., Inglis, H.M., Coetzer, R., and Johan, F.W.J.L., 2020, Statistical Design of Experiments: An Introductory Case Study for Polymer Composites Manufacturing Applications, *MATEC Web of Conf.*, 318, 1-6.

Cano-Lamadrid, M., Martínez-Zamora, L., Mozafari, L., Bueso, M.C., Kessler, M., and Artés-Hernández, F., 2023, Response Surface Methodology to Optimize the Extraction of Carotenoids from Horticultural by Products, *Foods*, 12(24), 1-17.

Chelladurai, S.J.S., Murugan, K., Ray, A.P., Upadhyaya, M., Narasimharaj, V., and Gnanasekaran, S., 2021, Optimization of Process Parameters Using Response Surface Methodology: A review, *Mater Today Proc*, 37, 1301-1304.

Cowieson, A.J., Acamovic, T., and Bedford, M.R., 2006, Phytate and Phytase: Implications for Protein Utilization by Poultry, *Poult. Sci.*, 85(5), 878-885.

Da Silva, D.A.R.O., Jorge, L.M. de M., and Jorge, R.M.M., 2019, Kinetics Study and Modelling of Sorghum Grain Hydration, *Rev. Ciênc. Agronôm.*, 50, 44-53.

Deepa, S.S., Van, R.H., Brooks, S.V., Faulkner, J.A., Larkin, L., McArdle, A., Jackson, M.J., Vasilaki, A., and Richardson, A., 2019, Accelerated Sarcopenia in Cu/Zn Superoxide Dismutase Knockout Mice, *Free Radic. Biol. Med*, *132*, 19-23.

Edori, O.S., 2023, A Comparative Assessment of Concentrations of Heavy Metals in Un-soaked and Soaked Maize (*Zea mays*) and Guinea Corn (*Sorghum bicolor*) Sold in Port Harcourt, Rivers State, Nigeria, *Int. J. Chem. Chem. Process.*, 9(1), 17-26.

Espitia, P.J.P., Soares, B.Q., dos Reis, C.J.S., de Andrade, N.J., and de Souza Sant'Ana, A., 2022, Nutritional, Phytochemical, and Functional Potential of Sorghum, *Curr. Res. Food Sci.*, 5, 1345-1356.

Farouk, A.A., Ahamed, N.T., Hussin, A.S.M., Al-Zahrani, O.A., and Alotaibi, S., 2018, Optimization of The Conditions for Rice Bran Phytate Degradation by Their Own Phytases, *J. Appl. Biol. Biotechnol*., 6(3), 42-46.

Ferreira, S.L.C., Silva J.M.M., Felix, C.S.A., da Silva, D.L.F., Santos, A.S., Santos N.J.H., de Souza, C.T., Cruz J.R.A., and Souza, A.S., 2019, Multivariate Optimization Techniques in Food Analysis-A Review, *Food Chem.*, 273, 3-8.

Fox, J., and Weisberg, S., 2018, Visualizing Fit and Lack of fit in Complex Regression Models with Predictor Effect Plots and Partial Residuals, *J. Stat. Softw.*, 9(87),1-27.

Gaddameedi, A., Sheraz, S., Kumar, A., Li, K., Pellny, T., Gupta, R., Wan, Y., Moore, K.L., and Shewry, P.R., 2022, The Location of Iron and Zinc in Grain of Conventional and Biofortified Lines of Sorghum, *J. Cereal Sci.*, 107, 1-7.

Ganta, S., Rao, T.S., Srinivas, K.R., and Suman, P., 2022, Determination of Elemental Impurities in Valproic Acid an Epilepsy Drug by Using ICP-MS, *J. Trace Elem. Miner.*, 2, 1-10

Gola, D., Malik, A., Shaikh, Z.A., and Sreekrishnan, T.R., 2016, Impact of Heavy Metal Containing Wastewater on Agricultural Soil and Produce: Relevance of Biological Treatment, *Environ. Process.*, 3, 1063-1080.

Greiner, R., and Konietzny, U., 2006, Phytase for Food Application, *Food Technol. Biotechnol.*, 44(2), 125-140.

Haq, A.U., Muhammad, S., and Tokatli, C., 2023, Spatial Distribution of The Contamination and Risk Assessment of Potentially Harmful Elements in The Ghizer River Basin, Northern Pakistan, *J. Water Clim. Change*, 14, 2309-2322.

Hariprasanna, K., Chetankumar, B., Venkateswarlu, R., and Niharika, G., 2020, *Sorghum in the 21st Century: Food - Fodder - Feed - Fuel for a Rapidly Changing World*, Springer, Singapore.

Indrianingsih, A.W., Khasanah, Y., Noviana, E., Rahayu, E., Hastuti, H.P., Ni'maturrohmah, D., Suryani, A.E., Darsih, C., Windarsih, A., and Handayani, S., 2023, The Effect of Soaking of White and Red Varieties of Sorghum Bicolor Flour on Its Antioxidant, Antidiabetic, and Physicochemical Properties, *Food Human*, 1, 1531-1538.

Islam, M.S., Ahmed, M.K., Habibullah-Al-Mamun, M., and Raknuzzaman, M., 2015, The Concentration, Source and Potential Human Health Risk of Heavy Metals in the Commonly Consumed Foods in Bangladesh, *Ecotoxicol. Environ. Saf.*, 122, 462-469.

Iwundu, M.P., and Cosmos, 2022, The Efficiency of Seven-Variable Box-Behnken Experimental Design with Varying Center Runs on Full and Reduced Model Types, *J. Math. Stat*., 18(1), 196-207.

Jarjees, F.Z., and Darwesh, D.A., 2023, Heavy Metals Concentration in Commercial Rice Available at Erbil City Markets, Iraq and Soaking Effects, *Baghdad Sci. J.*, 20, 967-978.

Juniawanti, D.R., 2020, Decreased Lead Levels, Kupang, and Boiling, *J. Public Health Sci. Res.*, 1(1), 1-5.

Kale, S.J., Jha, S.K., Jha, G.K., Sinha, J.P., and Lal, S.B., 2015, Soaking Induced Changes in Chemical Composition, Glycemic Index and Starch Characteristics of Basmati Rice, *Rice Sci.*, 22, 227-236.

Kayan, B., and Gözmen, B., 2012, Degradation of Acid Red 274 Using H_2O_2 in Subcritical Water: Application of Response Surface Methodology, *J. Hazard. Mater*, 201, 100-106.

Khan, S.H., Atif, M., Mukhtar, N., Rehman, A., and Fareed, G., 2013, Effect of Phytase Supplementation on The Performance and Phosphorus Utilization in Broiler Chickens, *Anim. Feed Sci. Technol.*, 179, 103-111.

Koo, Y.J., Pack, E.C., Lee, Y.J., Kim, H.S., Jang, D.Y., Lee, S.H., Kim, Y.S., Lim, K.M., and Choi, D.W., 2020, Determination of Toxic Metal Release from Metallic Kitchen Utensils and Their Health Risks, *Food Chem. Toxicol.*, 145, 1-13.

Kumar, A., Dash, G.K., Sahoo, S.K., Lal, M.K., Sahoo, U., Sah, R.P., Ngangkham, U., Kumar, S., Baig, M.J., Sharma, S., and Lenka, S.K., 2023, Phytic Acid: A Reservoir of Phosphorus in Seeds Plays a Dynamic Role in Plant and Animal Metabolism, *Phytochem. Rev.*, 22, 1281-1304.

Kumari, M., and Gupta, S.K., 2019, Response Surface Methodological (RSM) Approach for Optimizing the Removal of Trihalomethanes (THMs) and Its Precursor's by Surfactant Modified Magnetic Nanoadsorbents (sMNP) - An Endeavor to Diminish Probable Cancer Risk, *Sci. Rep.*, 9, 1-11.

Kuras, R., Janasik, B., Stanislawska, M., Kozlowska, L., and Wasowicz, W., 2017, Assessment of Mercury Intake from Fish Meals Based on Intervention Research in the Polish Subpopulation, *Biol. Trace Elem. Res.*, 179, 23-31.

Kyomugasho, C., Willemsen, K.L.D.D., Christiaens, S., Van Loey, A.M., and Hendrickx, M.E., 2015, Pectin-Interactions and In Vitro Bioaccessibility of Calcium and Iron in Particulated Tomato-Based Suspensions, *Food Hydrocoll.*, 49, 164-175.

Lenth, R.V., 2009, Response Surface Methods in R Using RSM, *J. Stat. Softw*., 7(32),1-17.

Manzoor, M.F., Ali, A., Ain, H.B.U., Kausar, S., Khalil, A.A., Aadil, R.M., and Zeng, X.A., 2024, Bioaccessibility Mechanisms, Fortification Strategies, Processing Impact on Bioavailability, and Therapeutic Potentials of Minerals in Cereals, *Future Foods*, 10, 1-17.

Meena, K., Meena, D.K., Jacob, J., Aruna, C., and Visarada, K.B.R.S., 2024, Unveiling the Antioxidant Arsenal of Colored Sorghum: A Path to Functional Food Development, *Agriculture*, 14(4), 566.

Mishra, D., Kumar, S., and Mishra, B.N., 2021, An Overview of Morpho-Physiological, Biochemical, and Molecular Responses of Sorghum Towards Heavy Metal Stress., *Rev. Environ. Contam. Toxicol.*, 256, 155-177.

Murugesan, S., Surekar, B., Mandal, S., Pandey, B., and Oulkar, D., 2020, Determination of Trace Heavy Metals in Spices Using Single Quadrupole ICP-MS, *Thermo Sci. Appl. Note*, 44476, 1-8

Nawab, J., Farooqi, S., Xiaoping, W., Khan, S., and Khan, A., 2018, Levels, Dietary Intake, and Health Risk of Potentially Toxic Metals in Vegetables, Fruits, and Cereal Crops in Pakistan, *Environ. Sci. Pollut. Res.*, 25, 5558-5571.

Nucera, S., Serra, M., Caminiti, R., Ruga, S., Passacatini, L.C., Macrì, R., Scarano, F., Maiuolo, J., Bulotta, R., Mollace, R., Bosco, F., Guarnieri, L., Oppedisano, F., Ilari, S., Muscoli, C., Palma, E., and Mollace, V., 2024, Non-Essential Heavy Metal Effects in Cardiovascular Diseases: An Overview of Systematic Reviews, *Front. Cardiovasc. Med.*, 11, 1-3.

Oliveira, K.G., Queiroz, V.A.V., Carlos, L.A., Cardoso, L.M., Pinheiro-Sant'Ana, H.M., Anunciacao, P.C., Menezes, C.B., Silva, E.C., and Barros, F., 2017, Effect of The Storage Time and Temperature on Phenolic Compound of Sorghum Grain and Flour, *Food Chem.*, 216, 390-398.

Paiva, C.L., Queiroz, V.A.V., Simeone, M.L.F., Schaffert, R.E., de Oliveira, A.C., and da Silva, C.S., 2017, Mineral Content of Sorghum Genotypes and The Influence of Water Stress, *Food Chem.*, 214, 400-405.

Paramita, R.W., Wardhani, E., dan Pharmawati, K., 2017, Kandungan Logam Berat Kadmium (Cd) dan Kromium (Cr) di Air Permukaan dan Sedimen: Studi kasus Waduk Saguling Jawa Barat, *J. Online Inst. Teknol. Nas.*, 5, 1-12.

Peana, M., Pelucelli, A., Medici, S., Cappai, R., Nurchi, V.M., and Zoroddu, M.A., 2021, Metal Toxicity and Speciation: A Review, *Curr. Med. Chem.*, 28, 7190-7208.

Pontieri, P., Troisi, J., Calcagnile, M., Bean, S.R., Tilley, M., Aramouni, F., Boffa, A., Pepe, G., Del Giudice, F., Chessa, A.L., Smolensky, D., Aletta, M., Alifano, P., and Del Giudice, L., 2022, Chemical Composition, Fatty Acid and Mineral Content of Food-Grade White, Red and Black Sorghum Varieties Grown In The Mediterranean Environment, *Foods*, 11(3), 436.

Qi, Y., Du, F., Jiang, Z., Qiu, B., Guan, Q., Liu, J., and Xu, T., 2018, Optimization of Starch Isolation from Red Sorghum Using Response Surface Methodology, *LWT-Food Sci. Technol.*, 91, 242-248.

Rahmawati, S., 2023, Analisis Kandungan Asam Fitat dan Tanin pada Beras, *Amerta Nutr.*, 7(1), 1-8.

Rousseau, S., Pallares P.A., Vancoillie, F., Hendrickx, M., and Grauwet, T., 2020, Pectin and Phytic Acid Reduce Mineral Bioaccessibility in Cooked Common Bean Cotyledons Regardless of Cell Wall Integrity, *Food Res. Int.*,137, 1-10.

Saad, A.A. dan Adnan, J.N.A.P., 2023, Analisis Logam Berat Kromium (Cr) pada Sediaan Perona Pipi (Blush On) yang Beredar di Pasar Butung Kota Makassar

Secara Inductively Coupled Plasma-Mass Spectrometry (ICP-MS), *J. Pharm. Pelamonia*, 3, 17-26.

Santos, P.M., Simeone, M.L.F., Pimentel, M.A.G., and Sena, M.M., 2019, Non-Destructive Screening Method for Detecting the Presence of Insects in Sorghum Grains Using Near Infrared Spectroscopy and Discriminant Analysis, *Microchem. J.*, 149, 1-7.

Sembajwe, L.F., Nfambi, J., Lugaajju, A., Namaganda, A., Acen, E.L., and Kalyesubula, R., 2023, Arsenic Levels in Rice Brands Sold in Kampala: An Experimental Study to Show the Modifying Effect of Boiling, Soaking and Washing, *J. Food Saf. Hyg.*, 9, 162-174.

Shivange, A.V., and Schwaneberg, U., 2017, *Recent Advances in Directed Phytase Evolution and Rational Phytase Engineering*, Springer Cham, Madrid Spain.

Singh, T.S., and Verma, T.N., 2019, Taguchi Design Approach for Extraction of Methyl Ester from Waste Cooking Oil Using Synthesized CaO as Heterogeneous Catalyst: Response Surface Methodology Optimization, *Energy Convers. Manag.*, 182, 383-397.

Suratno, Puspitasari, R., Purnadayanti, Z., and Sandra, N., 2020, Metals Accumulation in Muscle Tissues and Digestive Contents of Kerang Geton (*Periglypta Reticulata*) From Lancang Island, Jakarta, *Indones. J. Chem.*, 20, 1131-1142.

Taher, M.M., and Al-Hammadi, M.M.S., 2019, Assessing the Impact of Wastewater Irrigation on Cobalt Cadmium and Lead Contents of Grains of Sorghum Bicolor, *Arch. Pharm. Sci. Ain Shams Univ.*, 3, 90-98.

Telloli, C., Cicconi, F., Manzi, E., Borgognoni, F., Salvi, S., Iapalucci, M.C., and Rizzo, A., 2024, Multi-Elemental Analysis of Commercial Wheat Flours By ICP-MS Triple Quadrupole in Function of The Milling Degree, *Food Chem.*, 450, 1-9.

Wang, C., Li, W., Chen, D., Cai, J., Zhang, K., Wei, J., Sun, H., Gu, J., Zhang, X., Li, G., and Liu, K., 2024, Chemometric Assessment of Electronic Cigarettes Based on the ICP-MS Determination of Multiple Heavy Metal Concentrations, *Chin. J. Anal. Chem.*, 52, 1-6.

Wu, Y., Gao, Y., and Li, D., 2009, Hydrolysis of Phytic Acid and Release of Metal Ions in Acidic Conditions: Mechanistic Insights, *J. Agric. Food Chem.*, 57(19), 9031-9037.