

DAFTAR PUSTAKA

- Aboutorab, N., B. Sham Baharin, R. Abdul Rahman, J. Selamat, dan C. G. Hean, 2018, Effects of Indirect Sonication Pretreatment and Solvent Extraction on The Xanthone Content and Its Antioxidant Activities of Freeze Dried Mangosteen (*Garcinia Mangostana* Linn.) pericarp powder extracts, *International Food Research Journal*, 25 (6): 2453–58.
- Adamovics, J.A., 1997, *Chromatographic Analysis of Pharmaceuticals*, 58-59, Marcel Dekker, New York.
- Agelet, L.E., dan C.R. Hurburgh, 2010, A tutorial on Near Infrared Spectroscopy and Its Calibration, *Critical Reviews in Analytical Chemistry*, 40 (4): 246–60.
- Agustina, R., R. Andayani, dan Dachriyanus, 2014, Development and Validation of Thin-Layer Chromatographic Method for Determination of α -Mangostin in Young Pericarp, Ripe Pericarp and Bark Extract of *Garcinia mangostana* L. Using TLC-Densitometry, *International Journal of Research in Pharmaceutical Sciences*, 5 (4): 294–98.
- Ahmad, M., B.M. Yamin, dan A.M. Lazim, 2013, A Study on Dispersion and Characterisation of A-Mangostin Loaded pH Sensitive Microgel Systems, *Chemistry Central Journal*, 7 (1): 85.
- Ahuja, S., dan M.W. Dong, 2005, *Handbook of Pharmaceutical Analysis by HPLC*. edisi 6, 22-30, Elsevier Ltd, United Kingdom.
- Aisha, A.F.A., K.M. Abu-Salah, Z.D. Nassar, M.J. Siddiqui, Z. Ismail, dan A.M.S.A. Majid, 2011, Antitumorigenicity of Xanthon-Rich Extract From *Garcinia mangostana* Fruit Rinds on HCT 116 Human Colorectal Carcinoma Cells, *Brazilian Journal of Pharmacognosy*, 21 (6): 1025–34.
- Andayani, R., F.S. Wahyuni, Y. Wirasti, dan Dachriyanus, 2015, Development and Validation of RP-HPLC Method for Quantitative Estimation of α -Mangostin in The Rind Extract and Fractions of *Garcinia mangostana* L. and Their Cytotoxic Activity on T47D Breast Cancer Cell Line, *International Journal of Pharmacy and Pharmaceutical Sciences*, 7 (2): 174–78.
- AOAC, 2016, *Appendix F: Guidelines for Standard Method Performance Requirements*, 9, Association of Official Analytical Chemist Inc, United Kingdom.
- Asasutjarit, R., P. Larpmahawong, A. Fuongfuchat, V. Sareedenchai, dan S. Veeranondha, 2014, Physicochemical properties and Anti-*Propionibacterium acnes* Activity of Film-Forming Solutions Containing Alpha-Mangostin-Rich Extract, *AAPS PharmSciTech*, 15 (2): 306–16.
- Asasutjarit, R., T. Meesomboon, P. Adulheem, S. Kittiwisut, P. Sookdee, W. Samosornsuk, dan A. Fuongfuchat, 2019, Physicochemical Properties of

Alpha-Mangostin Loaded Nanomeulsions Prepared by Ultrasonication Technique, *Heliyon*, 5 (9).

- Bandaranayake, WiM, 2006, Quality Control , Screening , Toxicity , and Regulation of Herbal Drugs, dalam I. Ahmad, F. Aqil, dan M. Owais (Eds.) *Modern Phytomedicine : Turning Plants into Drugs*, 25-31, Wiley-VCH Verlag GmbH & Co. KGaA.
- Bélanger, J.M.R., J.J. R. Paré, dan M. Sigouin, 1997, High Performance Liquid Chromatography (HPLC): Principles and Applications, dalam J.J. R. Paré dan J.M.R. Bélanger (Eds.) *Instrumental Methods in Food Analysis*, Vol. 18, 46-48, Elsevier, Canada.
- Bhattaram, V.A., U. Graefe, C. Kohlert, M. Veit, dan H. Derendorf, 2002, Pharmacokinetics and Bioavailability of Herbal Medicinal Products, *Phytomedicine*, 9 (SUPPL. 3): 1–33.
- Blanco, M., J. Coello, H. Iturriaga, S. MasPOCH, dan C. De La Pezuela, 1998, Near-infrared spectroscopy in the pharmaceutical industry, *Analyst*, 123 (8): 135–50.
- Bumrungpert, A., R.W. Kalpravidh, S. Suksamrarn, A. Chaivisuthangkura, C. Chitchumroonchokchai, dan M.L. Failla, 2009, Bioaccessibility, Biotransformation, and Transport of A-Mangostin From *Garcinia mangostana* (Mangosteen) using Simulated Digestion and Caco-2 Human Intestinal Cells, *Molecular Nutrition and Food Research*, 53 (SUPPL. 1): 54–61.
- Cai, L., 2014, Thin Layer Chromatography, *Current Protocols in Essential Laboratory Techniques*, 2014 (February 2014): 6.3.1-6.3.18.
- Chaivisuthangkura, A., Y. Malaikaew, A. Chaovanalikit, A. Jaratrungtawee, P. Panseeta, P. Ratananukul, dan S. Suksamrarn, 2009, Prenylated Xanthone Composition of *Garcinia mangostana* (Mangosteen) Fruit Hull, *Chromatographia*, 69 (3–4): 315–18.
- Charernsriwilaiwat, N., T. Rojanarata, T. Ngawhirunpat, M. Sukma, dan P. Opanasopit, 2013, Electrospun Chitosan-Based Nanofiber Mats Loaded with *Garcinia mangostana* Extracts, *International Journal of Pharmaceutics*, 452 (1–2): 333–43.
- Chatwal, G.R., dan S.K. Anand, 2008, *Instrumental Method of Chemical Analysis*, 6; 272, Himalaya Publishing House, Mumbai.
- Chitchumroonchokchai, C., K.M. Riedl, S. Suksumrarn, S.K. Clinton, A.D. Kinghorn, dan M.L. Failla, 2012, Xanthones in Mangosteen Juice Are Absorbed and Partially Conjugated by Healthy Adults, *Journal of Nutrition*, 142 (4): 675–80.
- Choi, Y.H., S.Y. Han, Y.J. Kim, Y.M. Kim, dan Y.W. Chin, 2014, Absorption, Tissue Distribution, Tissue Metabolism and Safety of A-Mangostin in Mangosteen Extract Using Mouse Models, *Food and Chemical Toxicology*,

66: 140–46.

- Chomnawang, M.T., S. Surassmo, V.S. Nukoolkarn, dan W. Gritsanapan, 2005, Antimicrobial Effects of Thai Medicinal Plants Against Acne-Inducing Bacteria, *Journal of Ethnopharmacology*, 101 (1–3): 330–33.
- Dong, M.W., dan K. Zhang, 2014, Ultra-High-Pressure Liquid Chromatography (UHPLC) in Method Development, *Trends in Analytical Chemistry*, 63: 21–30.
- Eserian, J.K., dan M. Lombardo, 2015, Method Validation in Pharmaceutical Analysis: From Theory to Practical Optimization, *INNOVATIONS in pharmacy*, 6 (1): 5–7.
- Ettre, L.S., 1993, Nomenclature for Chromatography (IUPAC Recommendations 1993), *Pure & Appl. Chem.*, 65 (4): 819–72.
- Fang, L., Y. Liu, H. Zhuang, W. Liu, X. Wang, dan L. Huang, 2011, Combined Microwave-Assisted Extraction and High-Speed Counter-Current Chromatography For Separation and Purification Of Xanthones from *Garcinia mangostana*, *Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences*, 879 (28): 3023–27.
- FDA, 2015, *Elemental Analysis Manual*, US Food and Drug Administration, USA.
- Forgács, E., dan T. Cserháti, 2003, Chromatography, dalam B. Caballero, L. Trugo, dan P.M. Finglas (Eds.), *Encyclopedia of Food Sciences and Nutrition*, edisi 2, 1259–1267, Elsevier, Amsterdam.
- Gaffney, J. S., N. A. Marley, dan D. E. Jones, 2012, Fourier Transform Infrared (FTIR) Spectroscopy, dalam E.N. Kaufmann (Ed.) *Characterization of Materials*, edisi 2, 1114–1115. John Wiley & Sons, Inc.
- Gandjar, I.G., dan A. Rohman, 2007, *Kimia Farmasi Analisis*, 336;390-391;466, Pustaka Pelajar, Yogyakarta.
- González, A.G., dan M.A. Herrador, 2007, A Practical Guide to Analytical Method Validation, including Measurement Uncertainty and Accuracy Profiles, *Trends in Analytical Chemistry*, 26 (3): 227–38.
- Habibie, H., R. Heryanto, M. Rafi, dan L.K. Darusman, 2017, Development of Quality Control Method For Glucofarmaka Antidiabetic Jamu by HPLC Fingerprint Analysis, *Indonesian Journal of Chemistry*, 17 (1): 79–85.
- Han, S.Y, Y.W. Chin, D.Y. Kim, dan Y.H. Choi, 2013, Simultaneous Determination of α - And γ -Mangostins in Mouse Plasma by HPLC-MS/MS Method: Application to a Pharmacokinetic Study of Mangosteen Extract in Mouse, *Chromatographia*, 76 (11–12): 643–50.
- Harmita, 2004, Petunjuk Pelaksanaan Validasi Metode dan Cara Perhitungannya, *Majalah Ilmu Kefarmasian*, I (3): 117–35.

- Hemsekhar, M., K. Sunitha, M.S. Santhosh, S. Devaraja, K. Kemaparaju, B.S. Vishwanath, S.R. Niranjana, dan K.S. Girish, 2011, An Overview on Genus *Garcinia*: Phytochemical and Therapeutical Aspects, *Phytochemistry Reviews*, 10 (3): 325–51.
- ICH, 2005, *Validation of Analytical Procedures: Text and Methodology Q2(R1)*, ICH Harmonised Tripartite Guideline.
- ICUC, 2003, Fruits for the Future : Mangosteen, *Factsheet*, International Centre for Underutilized Crops, Southampton.
- Jujun, P., K. Pootakham, Y. Pongpaibul, P. Tharavichitkul, dan C. Ampasavate, 2009, HPLC Determination of Mangostin and Its Application to Storage Stability Study, *Chiang Mai University Journal of Natural Sciences*, 8 (1): 43–53.
- Kamboj, A., 2012, Analytical Evaluation of Herbal Drugs dalam O. Vallisuta dan S. Olimat (Eds.), *Drug Discovery: Research in Pharmacognosy*, 32, InTech, _.
- Kealey, D., dan P.J. Haines, 2002, *Instant Notes: Analytical Chemistry*. Vol. 66, 133; 135-136, 159, 161, BIOS Scientific Publisher Limited, London.
- Kelly, K., 2014, *Choosing an Internal Standard*, 2014, https://www.phenomenex.com/Info/WebDocumentServe/gcctt_internalstandard.pdf, diakses pada 25 November 2020.
- Khaw, K.Y., C.W. Chong, dan V. Murugaiyah, 2020, LC-QTOF-MS Analysis of Xanthone Content in Different Parts of *Garcinia mangostana* and Its Influence on Cholinesterase Inhibition, *Journal of Enzyme Inhibition and Medicinal Chemistry*, 35 (1): 1433–41.
- Kumar, S., K. Jyotirmayee, dan M. Sarangi, 2013, Thin Layer Chromatography : A Tool of Biotechnology for Isolation of Bioactive, *International Journal of Pharmaceutical Sciences Review and Research*, 18 (1): 126–32.
- Kureshi, A.A., C. Dholakiya, T. Hussain, A. Mirgal, S.P. Salvi, P.C. Barua, M. Talukdar, dkk., 2019, Simultaneous Identification and Quantification of Three Xanthenes and Two Polyisoprenylated Benzophenones in Eight Indian *Garcinia* Species Using a Validated UHPLC-PDA Method, *Journal of AOAC International*, 102 (5): 1423–34.
- Lade, B.D., A.S. Patil, H.M. Paikrao, A.S. Kale, dan K.K. Hire, 2014, A Comprehensive Working , Principles and Applications of Thin Layer Chromatography, *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 5 (4): 486–503.
- Larsuprom, L., N. Rungroj, C. Lekcharoensuk, C. Pruksakorn, S. Kongkiatpaiboon, C. Chen, dan U. Sukatta, 2019, In Vitro Antibacterial Activity of Mangosteen (*Garcinia mangostana* Linn.) Crude Extract Against *Staphylococcus pseudintermedius* Isolates From *Canine pyoderma*, *Veterinary Dermatology*, 30 (6): 487-e145.

- Lavine, B.K., J.P. Ritter, dan S. Peterson, 2002, Enhancement of Selectivity in Reversed-Phase Liquid Chromatography, *Journal of Chromatography A*, 946 (1-2): 83-90.
- Li, Li, I. Brunner, A. Han, M. Hamburger, A.D. Kinghorn, R. Frye, dan Veronika Butterweck, 2011, Pharmacokinetics of α -Mangostin in Rats After Intravenous and Oral Application, *Molecular Nutrition and Food Research*, 55 (SUPPL. 1): 67-74.
- Li, Li, A. Han, A.D. Kinghorn, R.F. Frye, H. Derendorf, dan V. Butterweck, 2013, Pharmacokinetic Properties of pure Xanthenes in Comparison to A Mangosteen Fruit Extract in Rats, *Planta Medica*, 79 (8): 646-53.
- Liang, Y.Z., P. Xie, dan K. Chan, 2004, Quality Control of Herbal Medicines, *Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences*, 812 (1-2 SPEC. ISS.): 53-70.
- Lueangarun, Suparuj, Karuna Sriviriyakul, Therdpong Tempark, Chittima Managit, dan Pongtip Sithisarn, 2019, Clinical Efficacy of 0.5% Topical Mangosteen Extract in Nanoparticle Loaded Gel in Treatment of Mild-To-Moderate Acne Vulgaris: A 12-Week, Split-Face, Double-Blinded, Randomized, Controlled Trial, *Journal of Cosmetic Dermatology*, 18 (5): 1395-1403.
- Ma, X., X. Guo, Y. Song, L. Qiao, W. Wang, M. Zhao, P. Tu, dan Y. Jiang, 2016, An Integrated Strategy for Global Qualitative and Quantitative Profiling of Traditional Chinese Medicine Formulas: Baoyuan Decoction as a Case, *Scientific Reports*, 6 (November): 1-18.
- Mahabusarakam, Wilawan, Plchaet Wlriyachitra, dan Walter C. Taylor, 1987, Chemical Constituents of *Garcinia mangostana*, *Journal of Natural Products*, 50 (3): 474-78.
- Malviya, R., V. Bansal, O.P. Pal, dan P.K. Sharma, 2010, High Performance Liquid Chromatography, *Journal of Global Pharma Technology*, 2 (5): 22-26.
- Mettler Toledo, 2015, *UV / VIS Spectrophotometry- Fundamentals and Applications*, Mettler Toledo, _.
- Misra, H., B.K. Dwivedi, D. Mehta, B.K. Mehta, dan D.C. Jain, 2009, Development and Validation of High Performance Thin-Layer Chromatographic Method for Determination of α -mangostin in Fruit Pericarp of Mangosteen Plant (*Garcinia mangostana* L.) using Ultraviolet - Visible Detection, *Records of Natural Products*, 3 (4): 178-86.
- Moldoveanu, S.C., dan V. David, 2013, *Essentials in Modern HPLC Separations*, 413; 420; 422-423, Elsevier, USA.
- Muchtaridi, M., M. Prasetio, N.M. Saptarini, dan F.A. Saputri, 2018, High Performance Liquid Chromatography for α -Mangostin Analysis in Mangosteen Pericarp Extract for Routine Analysis with Photodiode Array Detector, *Rasayan Journal of Chemistry*, 11 (3): 973-78.

- Muchtaridi, M., D. Suryani, W.A. Qosim, dan N.M. Saptarini, 2016, Quantitative Analysis of A-Mangostin in Mangosteen (*Garcinia mangostana* L.) Pericarp Extract From Four District of West Java by HPLC Method, *International Journal of Pharmacy and Pharmaceutical Sciences*, 8 (8): 232–36.
- Mulia, K., F. Fauzia, dan E.A. Krisanti, 2019, Polyalcohols as Hydrogen-Bonding Donors in Choline Chloride-Based Deep Eutectic Solvents for Extraction of Xanthones from the Pericarp of *Garcinia mangostana* L, *Molecules*, 24 (3).
- NCBI, 2005, Pubchem Database Alpha-Mangostin. 2005. <https://pubchem.ncbi.nlm.nih.gov/compound/5281650>, diakses pada 25 Maret 2020.
- Ngawhirunpat, T., P. Opanasopi, M. Sukma, C. Sittisombut, A. Kat, dan I. Adachi, 2010, Antioxidant, Free Radical-Scavenging Activity and Cytotoxicity of Different Solvent Extracts and Their Phenolic Constituents from The Fruit Hull of Mangosteen (*Garcinia mangostana*), *Pharmaceutical Biology*, 48 (1): 55–62.
- Pan-On, S., S. Rujivipat, A. Ounaroorn, C. Kongkaew, dan W. Tiyafoonchai, 2018, Development, Characterization And Skin Irritation of Mangosteen Peel Extract Solid Dispersion Containing Clay Facial Mask, *International Journal of Applied Pharmaceutics*, 10 (5): 202–8.
- Paré, J.R.J., dan V. Yaylayan, 1997, Mass spectrometry: Principles and applications, dalam J.J. R. Paré dan J.M.R. Bélanger (Eds.), *Instrumental Methods in Food Analysis*, 240–241, Elsevier, Canada.
- Pasquini, C., 2003, Near Infrared Spectroscopy: fundamentals, Practical Aspects and Analytical Applications, *Journal of the Brazilian Chemical Society*, 14 (2): 198–219.
- Pedraza-Chaverri, J., N. Cárdenas-Rodríguez, M. Orozco-Ibarra, dan J.M. Pérez-Rojas, 2008, Medicinal Properties of Mangosteen (*Garcinia mangostana*), *Food and Chemical Toxicology*, 46 (10): 3227–39.
- Peerapattana, J., K. Otsuka, dan M. Otsuka, 2013, Application of NIR Spectroscopy for The Quality Control of Mangosteen Pericarp Powder: Quantitative Analysis of Alpha-Mangostin in Mangosteen Pericarp Powder and Capsule, *Journal of Natural Medicines*, 67 (3): 452–59.
- Peerapattana, J., K. Otsuka, Y. Hattori, dan M. Otsuka, 2014, Quantitative Analysis of α -Mangostin in Hydrophilic Ointment Using Near-Infrared Spectroscopy, *Drug Development and Industrial Pharmacy*, 41 (3): 515–21.
- Petiwala, S.M., G. Li, A. Ramaiya, A. Kumar, R.K. Gill, S. Saksena, dan J.J. Johnson, 2014, Pharmacokinetic Characterization of Mangosteen (*Garcinia mangostana*) Fruit Extract Standardized to α -Mangostin in C57BL/6 Mice, *Nutrition Research*, 34 (4): 336–45.
- Phenomenex, 2020, Synergi HPLC Information, 2020,

<https://www.phenomenex.com/products/detail/Synergi>, diakses pada 4 Desember 2020.

- Pothitirat, W., dan W. Gritsanapan, 2008, Thin-Layer Chromatography-Densitometric Analysis of α -Mangostin Content in *Garcinia mangostana* Fruit Rind extracts, *Journal of AOAC International*, 91 (5): 1145–48.
- Pothitirat, W., M.T. Chomnawang, dan W. Gritsanapan, 2009^a, Anti-Acne Inducing Bacteria Activity and α -Mangostin Content of *Garcinia mangostana* Fruit Rind Extracts from Different Provenience, *Songklanakarin Journal of Science and Technology*, 31 (1): 41–47.
- Pothitirat, W., M.T. Chomnawang, R. Supabphol, dan W. Gritsanapan, 2009^b, Comparison of Bioactive Compounds Content, Free Radical Scavenging And Anti-Acne Inducing Bacteria Activities of Extracts from The Mangosteen Fruit Rind At Two Stages of Maturity, *Fitoterapia*, 80 (7): 442–47.
- Pothitirat, W., dan W. Gritsanapan, 2009, HPLC Quantitative Analysis Method for the Determination of α -Mangostin in Mangosteen Fruit Rind Extract, *Thai Journal of Agricultural Science*, 42 (1): 7–12.
- Pothitirat, W., M.T. Chomnawang, dan W. Gritsanapan, 2010^a, Anti-Acne-Inducing Bacterial Activity of Mangosteen Fruit Rind Extracts, *Medical Principles and Practice*, 19 (4): 281–86.
- Pothitirat, W., M.T. Chomnawang, R. Supabphol, dan W. Gritsanapan, 2010^b, Free radical Scavenging and Anti-Acne Activities of Mangosteen Fruit Rind Extracts Prepared by Different Extraction Methods, *Pharmaceutical Biology*, 48 (2): 182–86.
- Ravisankar, P., Ch.N. Navya, D. Pravallika, dan D.N. Sri, 2015, A Review on Step-by-Step Analytical Method Validation, *IOSR Journal Of Pharmacy*, 5 (10): 7–19.
- Rivero, B., dan I. Garibay, 2019, Development and Validation of a Stability-Indicating HPLC Method for The Quantification of α -Mangostin in Dietary Supplements, *Natural Product Communications*, 14 (7): 1–5.
- Rubiyanti, R., Y. Susilawati, dan M. Muchtaridi, 2016, Potensi Ekonomi dan Manfaat Kandungan Alfa-Mangostin Serta Gartanin dalam Kulit Buah Manggis (*Garcinia mangostana* Linn), *Farmaka*, 15 (1): 15–25.
- Sage, E.E., N. Jailani, A.Z.Md Taib, N.M. Noor, Md.I.M. Said, M.A. Bakar, dan M.M. Mackeen, 2018, From the Front or Back Door? Quantitative Analysis of Direct and indirect Extractions of α -Mangostin from Mangosteen (*Garcinia mangostana*), *PLoS ONE*, 13 (10): 1–12.
- Samprasit, W., R. Kaomongkolgit, M. Sukma, T. Rojanarata, T. Ngawhirunpat, dan P. Opanasopit, 2015, Mucoadhesive Electrospun Chitosan-Based Nanofibre Mats for Dental Caries Prevention, *Carbohydrate Polymers*, 117: 933–40.

- Shan, Y., dan W. Zhang, 2010, Preparative Separation of Major Xanthenes from Mangosteen Pericarp Using High Performance Centrifugal Partition Chromatography, *Journal of Separation Science*, 33 (9): 1274–78.
- Snyder, L.R., J.J. Kirkland, J.L. Glajch, I. Krull, dan M. Szulc, 1997, Detection Sensitivity and Selectivity, dalam L.R. Snyder, J.J. Kirkland, dan J.L. Glajch (Eds.), *Practical HPLC Method Development*, edisi 2, 89, John Wiley & Sons, New Jersey.
- Srihari, E., dan F.S. Lingganingrum, 2015, Ekstrak Kulit Manggis Bubuk, *Jurnal Teknik Kimia*, 10 (1): 1–7.
- Sriyanti, I., D. Edikresnha, A. Rahma, M.M. Munir, H. Rachmawati, dan K. Khairurrijal, 2018, Mangosteen Pericarp Extract Embedded in Electrospun PVP Nanofiber Mats: Physicochemical Properties and Release Mechanism of α -Mangostin, *International Journal of Nanomedicine*, 13: 4927–41.
- Sukatta, U., M. Takenaka, H. Ono, H. Okadome, I. Sotome, K. Nanayama, W. Thanapase, dan S. Isobe, 2013, Distribution of Major Xanthenes in the Pericarp, Aril, and Yellow Gum of Mangosteen (*Garcinia mangostana* Linn.) Fruit and Their Contribution to Antioxidative Activity, *Bioscience, Biotechnology and Biochemistry*, 77 (5): 984–87.
- Suvarnakuta, P., C. Chaweerungrat, dan S. Devahastin, 2011, Effects of Drying Methods on Assay and Antioxidant Activity of Xanthenes in Mangosteen Rind, *Food Chemistry*, 125 (1): 240–47.
- Swartz, Michael, 2010, HPLC Detectors: A Brief Review, *Journal of Liquid Chromatography and Related Technologies*, 33 (9–12): 1130–50.
- Tan, A., dan K. Awaiye, 2013, Use of Internal Standards in LC-MS Bioanalysis dalam W. Li, J. Zhang dan F.L.S. Tse (Eds), *Handbook of LC-MS Bioanalysis: Best Practices, Experimental Protocols, and Regulations*, 217–218, John Wiley & Sons, Inc, New Jersey.
- Tan, G.Y.T., W. Zimmermann, K.H Lee, J.C.W. Lan, H.S. Yim, dan H.S. Ng, 2017, Recovery of Mangostins from *Garcinia mangostana* Peels with An Aqueous Micellar Biphasic System, *Food and Bioproducts Processing*, 102 (1): 233–40.
- Viaene, J., K. Lanckmans, B. Dejaegher, D. Mangelings, dan Y.V. Heyden, 2016, Comparison of a Triple-Quadrupole and a Quadrupole Time-of-Flight Mass Analyzer to Quantify 16 Opioids in Human Plasma, *Journal of Pharmaceutical and Biomedical Analysis*, 127: 49–59.
- Wittenauer, J., S. Falk, U. Schweiggert-Weisz, dan R. Carle, 2012, Characterisation and Quantification of Xanthenes from The Aril and Pericarp of Mangosteens (*Garcinia mangostana* L.) and A Mangosteen Containing Functional Beverage by HPLC-DAD-MS n, *Food Chemistry*, 134 (1): 445–52.
- WHO, 2002, Traditional Medicine: Growing Needs and Potential, 1, World Health

Organization, Geneva.

WHO, 2016, *Guidelines on Validation*, Appendix 4, World Health Organization, Geneva.

Xu, W.K., H. Jiang, K. Yang, Y.Q. Wang, Q. Zhang, dan J. Zuo, 2017, Development and In Vivo Evaluation of Self-Microemulsion as Delivery System For α -Mangostin, *Kaohsiung Journal of Medical Sciences*, 33 (3): 116–23.

Yodhnu, Sukit, Anusak Sirikatitham, dan Chatchai Wattanapiromsakul, 2009, Validation of LC for The Determination of α -Mangostin in Mangosteen Peel Extract : A Tool for Quality Assessment of *Garcinia mangostana* L, *Journal of Chromatographic Science*, 47 (March): 185–89.

Zhao, Y., G. Tang, Q. Tang, J. Zhang, Y. Hou, E. Cai, S. Liu, D. Lei, L. Zhang, dan S. Wang, 2016, A Method of Effectively Improved α -Mangostin Bioavailability, *European Journal of Drug Metabolism and Pharmacokinetics*, 41 (5): 605–13.