

BIBLIOGRAPHY

- Ahuja, S., Dong, M.W., 2005. Handbook of Pharmaceutical Analysis by HPLC. Elsevier Inc., San Diego.
- Aisha, A., Abu-salah, K.M., Abdullah, K., Medical, I., Siddiqui, M.J., 2012. Quantification of α -, β -, and γ -mangostin in *Garcinia mangostana* fruit rind extracts by a reverse phase high performance liquid chromatography. doi:10.5897/JMPR11.1253
- Aizat, W.M., Ahmad-Hashim, F.H., Syed Jaafar, S.N., 2019. Valorization of mangosteen, “The Queen of Fruits,” and new advances in postharvest and in food and engineering applications: A review. *J. Adv. Res.* 20: 61–70. doi:10.1016/j.jare.2019.05.005
- Brighenti, V., Groothuis, S.F., Prencipe, F.P., Amir, R., Benvenuti, S., Pellati, F., 2017. Metabolite fingerprinting of *Punica granatum* L. (pomegranate) polyphenols by means of high-performance liquid chromatography with diode array and electrospray ionization-mass spectrometry detection. *J. Chromatogr. A* 1480: 20–31. doi:10.1016/j.chroma.2016.12.017
- Brinckmann, J.A., 2013. Emerging importance of geographical indications and designations of origin – authenticating geo-authentic botanicals and implications for phytotherapy 1587: 1581–1587.
- Bundeesomchok, K., Filly, A., Rakotomanomana, N., Panichayupakaranant, P., Chemat, F., 2016. Extraction of α -mangostin from *Garcinia mangostana* L. using alternative solvents: computational predictive and experimental studies. *LWT - Food Sci. Technol.* 65: 297–303. doi:10.1016/j.lwt.2015.08.036
- Cheok, C.Y., Chin, N.L., Yusof, Y.A., Talib, R.A., Law, C.L., 2013. Optimization of total monomeric anthocyanin (TMA) and total phenolic content (TPC) extractions from mangosteen (*Garcinia mangostana* Linn .) hull using ultrasonic treatments. *Ind. Crop. Prod.* 50: 1–7. doi:10.1016/j.indcrop.2013.07.024
- Cheok, C.Y., Mohd Adzahan, N., Abdul Rahman, R., Zainal Abedin, N.H., Hussain, N., Sulaiman, R., Chong, G.H., 2018. Current trends of tropical fruit waste utilization. *Crit. Rev. Food Sci. Nutr.* 58: 335–361. doi:10.1080/10408398.2016.1176009
- Durak, T., Depciuch, J., 2020. Effect of plant sample preparation and measuring methods on ATR-FTIR spectra results. *Environ. Exp. Bot.* 169: 103915. doi:10.1016/j.envexpbot.2019.103915
- Easmin, S., Islam, Z., Ghafoor, K., Ferdosh, S., Jaffri, J., Ali, E., Mirhosseini, H., Al-juhaimi, F.Y., Perumal, V., Khatib, A., 2016. Rapid investigation of α - glucosidase inhibitory activity of *Phaleria macrocarpa* extracts using FTIR-

- ATR based fingerprinting. *J. Food Drug Anal.* 25: 306–315. doi:10.1016/j.jfda.2016.09.007
- Easmin, S., Zaidul, I.S.M., Ghafoor, K., Ferdosh, S., Jaffri, J., Ali, M.E., Mirhosseini, H., Al-Juhaimi, F.Y., Perumal, V., Khatib, A., 2017. Rapid investigation of α -glucosidase inhibitory activity of *Phaleria macrocarpa* extracts using FTIR-ATR based fingerprinting. *J. Food Drug Anal.* 25: 306–315. doi:10.1016/j.jfda.2016.09.007
- El-kenawy, A.E., Hassan, S.M.A., Osman, H.H., 2019. Mangosteen (*Garcinia mangostana* L.), Nonvitamin and nonmineral nutritional supplements. Elsevier Inc. doi:10.1016/B978-0-12-812491-8.00045-X
- Esteki, M., Shahsavari, Z., Simal-Gandara, J., 2019. Food identification by high performance liquid chromatography fingerprinting and mathematical processing. *Food Res. Int.* 122: 303–317. doi:10.1016/j.foodres.2019.04.025
- Gao, A.W., Smith, R.L., van Weeghel, M., Kamble, R., Janssens, G.E., Houtkooper, R.H., 2018. Identification of key pathways and metabolic fingerprints of longevity in *C. elegans*. *Exp. Gerontol.* 113: 128–140. doi:10.1016/j.exger.2018.10.003
- Gondokesumo, M.E., Pardjianto, B., Sumitro, S.B., Widowati, W., Pardji, B., Bambang, S., Widowa, W., 2019. Xanthoness analysis and antioxidant activity analysis (Applying ESR) of six different maturity levels of mangosteen rind extract (*Garcinia mangostana* Linn .) 11: 369–373.
- Gutierrez-orozco, F., Failla, M.L., 2013. Biological activities and bioavailability of mangosteen xanthoness: a critical review of the current evidence 3163–3183. doi:10.3390/nu5083163
- Ibrahim, M.Y., Mariod, A.A., Mohan, S., Hashim, M., Abdulla, M.A., Abdelwahab, S.I., Arbab, I.A., Ali, L.Z., 2014. α mangostin from *Garcinia mangostana* Linn: an updated review of its pharmacological properties. *Arab. J. Chem.* doi:10.1016/j.arabjc.2014.02.011
- Irnawati, Riyanto, S., Martono, S., Rohman, A., 2020a. The employment of FTIR spectroscopy and chemometrics for authentication of pumpkin seed oil from sesame oil 4: 42–48.
- Irnawati, Riyanto, S., Martono, S., Rohman, A., 2020b. Determination of sesame oil, rice bran oil and pumpkin seed oil in ternary mixtures using FTIR spectroscopy and multivariate calibrations 4: 135–142.
- Ji, X., Avula, B., Khan, I.A., 2007. Quantitative and qualitative determination of six xanthoness in *Garcinia mangostana* L. by LC-PDA and LC-ESI-MS. *J. Pharm. Biomed. Anal.* 43: 1270–1276. doi:10.1016/j.jpba.2006.10.018
- Kureshi, A.A., Beena, C., Kar, A., Zachariah, T.J., Kumari, P., Dhanani, T.,

- Singh, R., Manivel, P., Kumar, S., Dholakiya, C., Hussain, T., Mirgal, A., Salvi, S.P., Barua, P.C., Talukdar, M., 2019. Simultaneous identification and quantification of three xanthoness and two polyisoprenylated benzophenones in eight indian garcinia species using a validated UHPLC-PDA Method. *J. AOAC Int.* 102: 1423–1434. doi:10.5740/jaoacint.18-0335
- Kusmayadi, A., Adriani, L., Abun, A., Muchtaridi, M., Tanuwiria, U.H., 2018. The effect of solvents and extraction time on total xanthone and antioxidant yields of mangosteen peel (*Garcinia mangostana L.*) extract. *Drug Invent. Today* 10: 2572–2576.
- Mayefis, D., Anugerah, Y., Rasyid, R., 2019. Determination of total xanthone content in the preparation of mangosteen pericarp capsules (*garcinia mangostana l.*) available on the market using UV-visible spectrophotometry method 24. doi:10.22146/mot.43871
- Miller, J.C., Miller, J.N., 2005. Statistic and chemometrics for analytical Chemistry, fifth edit. ed. Pearson Education Limited, Harlow.
- Muchtaridi, M., Pratiwi, R., Alam, G., Rohman, A., 2019. Analysis of gartanin in extract of mangosteen pericarp fruit (*Garcinia mangostana L.*) using spectrophotometric fourier transform infrared (FTIR) method 12: 874–879.
- Muchtaridi, M., Puteri, N.A., Milanda, T., Musfiroh, I., 2017. Validation analysis methods of α -mangostin , γ -mangostin and gartanin mixture in mangosteen (*Garcinia mangostana L.*) fruit rind extract from west java with HPLC 7: 125–130. doi:10.7324/JAPS.2017.71018
- Naguib, I.A., Abdelaleem, E.A., Zaazaa, H.E., Hussein, E.A., 2016a. Partial least-squares and linear support vector regression chemometric methods for simultaneous determination of amoxicillin trihydrate and dicloxacillin sodium in the presence of their common impurity. *J. AOAC Int.* 99: 972–979. doi:10.5740/jaoacint.16-0033
- Naguib, I.A., Abdelrahman, M.M., El Ghobashy, M.R., Ali, N.A., 2016b. Least-squares regression and spectral residual augmented classical least-squares chemometric models for stability-indicating analysis of agomelatine and its degradation products: a comparative study. *J. AOAC Int.* 99: 386–395. doi:10.5740/jaoacint.15-0286
- Nasrulloh, R., Rafi, M., Wahyuni, W.T., Shimma, S., Heryanto, R., 2018. HPLC fingerprint and simultaneous quantitative analysis of phyllanthin and hypophyllanthin for identification and authentication of Phyllanthus niruri from related species. *Brazilian J. Pharmacogn.* 28: 527–532. doi:10.1016/j.bjp.2018.04.014
- Navratilova, K., Hrbek, V., Kratky, F., Hurkova, K., Tomaniova, M., Pulkrabova, J., Hajslova, J., 2019. Green tea: Authentication of geographic origin based on UHPLC-HRMS fingerprints. *J. Food Compos. Anal.* 78: 121–128.

doi:10.1016/j.jfca.2019.02.004

- Nikolic, G.S., 2011. Fourier transforms new analytical approaches and ftir strategies. InTech, Rijeka, Croatia.
- Nollet, L.M.L., 2000. Food Analysis by HPLC, 2nd ed. Marcel Dekker, Inc., New York.
- Otto, M., 2017. Chemometrics, 3rd ed. Wiley-VCH, Freiberg.
- Ovalle-Magallanes, B., Eugenio-Pérez, D., Pedraza-Chaverri, J., 2017. Medicinal properties of mangosteen (*Garcinia mangostana* L.): a comprehensive update. *Food Chem. Toxicol.* 109: 102–122. doi:10.1016/j.fct.2017.08.021
- Pedro, P.F., Åberg, K.M., 2018. Can we beat overfitting?—A closer look at Cloarec's PLS algorithm. *J. Chemom.* 32: 1–10. doi:10.1002/cem.3002
- Rivero, B., Garibay, I., 2019. Development and validation of a stability-indicating hplc method for the quantification of α -mangostin in dietary supplements. doi:10.1177/1934578X19863948
- Rodríguez-Pérez, R., Fernández, L., Marco, S., 2018. Overoptimism in cross-validation when using partial least squares-discriminant analysis for omics data: a systematic study. *Anal. Bioanal. Chem.* 410: 5981–5992. doi:10.1007/s00216-018-1217-1
- Rohman, A., Arifah, F.H., Alam, G., Muchtaridi, M., 2020. The application of FTIR spectroscopy and chemometrics for classification of Mangosteen extract and its correlation with alpha-mangostin. *J. Appl. Pharm. Sci.* 10: 149–154. doi:10.7324/japs.2020.104019
- Rohman, A., Sudjadi, Devi, Ramadhani, D., Nugroho, A., 2015. Analysis of curcumin in *curcuma longa* and *Curcuma xanthorrhiza* using FTIR spectroscopy and chemometrics. *Res. J. Med. Plant* 9: 179–186. doi:10.3923/rjmp.2015.179.186
- Smith, B.C., 2011. Fundamentals of fourier transform infrared spectroscopy, Secon Edti. ed. Taylor & Francis.
- Supomo, Apriliana, A., Purnawati, T., Risqi, A., 2018. Formulation of antiacne cream dosage form containing mangosteen (*Garcinia mangostana* L.) pericarp ethanolic extract. *Indones. J. Pharm. Clin. Res.* 1: 37–44. doi:10.32734/idjpcr.v1i1.207
- Tulukcu, E., Cebi, N., Sagdic, O., 2019. Chemical fingerprinting of seeds of some salvia 1–12.
- Wang, S., Li, Q., Jing, M., Han, Y., Pi, R., Yang, X., Sabate, R., Lan, W., Chen, X.Y.J., 2016. Natural xanthenes from *garcinia mangostana* with multifunctional activities for the therapy of alzheimer ' s disease.

doi:10.1007/s11064-016-1896-y

- Wang, W., Jung, J., Tomasino, E., Zhao, Y., 2016. Optimization of solvent and ultrasound-assisted extraction for different anthocyanin rich fruit and their effects on anthocyanin compositions. *LWT - Food Sci. Technol.* 72: 229–238. doi:10.1016/j.lwt.2016.04.041
- Wittenauer, J., Falk, S., Schweiggert-weis, U., Carle, R., 2012. Characterisation and quantification of xanthoness from the aril and pericarp of mangosteens (*Garcinia mangostana L.*) and a mangosteen containing functional beverage by HPLC – DAD – MS n. *Food Chem.* 134: 445–452. doi:10.1016/j.foodchem.2012.02.094
- Zarena, A.S., Sankar, K.U., 2011. Phenolic acids, flavonoid profile and antioxidant activity in mangosteen (*Garcinia mangostana l.*) pericarp 1–7. doi:10.1111/j.1745-4514.2011.00575.x