

## DAFTAR PUSTAKA

- Abd Mutalib, M., Rahman, M. A., Othman, M. H. D., Ismail, A. F., & Jaafar, J. (2017). Scanning Electron Microscopy (SEM) and Energy-Dispersive X-Ray (EDX) Spectroscopy. In *Membrane Characterization*. Elsevier B.V. <https://doi.org/10.1016/B978-0-444-63776-5.00009-7>
- Akash, M. S. H., & Rehman, K. (2019). Essentials of pharmaceutical analysis. In *Essentials of Pharmaceutical Analysis*. <https://doi.org/10.1007/978-981-15-1547-7>
- Bunaciu, A. A., Udriștioiu, E. gabriela, & Aboul-Enein, H. Y. (2015). X-Ray Diffraction: Instrumentation and Applications. *Critical Reviews in Analytical Chemistry*, 45(4), 289–299. <https://doi.org/10.1080/10408347.2014.949616>
- Chatterjee, A., Gupta, M., & Srivastava, B. (2017). Spherical crystallization: A technique use to reform solubility and flow property of active pharmaceutical ingredients. *International Journal of Pharmaceutical Investigation*, 7(1), 4. [https://doi.org/10.4103/jphi.jphi\\_36\\_16](https://doi.org/10.4103/jphi.jphi_36_16)
- Chauhan, V., & Dalvadi, H. (2022). A Systematic Review of Spherical Agglomeration by Particle Design of Drug Formulation. *Pharmacophore*, 13(1), 83–90. <https://doi.org/10.51847/zkvusunenlq>
- Chen, H., Aburub, A., & Sun, C. C. (2019). Direct Compression Tablet Containing 99% Active Ingredient—A Tale of Spherical Crystallization. *Journal of Pharmaceutical Sciences*, 108(4), 1396–1400. <https://doi.org/10.1016/j.xphs.2018.11.015>
- Chen, H., Paul, S., Xu, H., Wang, K., Mahanthappa, M. K., & Sun, C. C. (2020). Reduction of Punch-Sticking Propensity of Celecoxib by Spherical Crystallization via Polymer Assisted Quasi-Emulsion Solvent Diffusion. *Molecular Pharmaceutics*, 17(4), 1387–1396. <https://doi.org/10.1021/acs.molpharmaceut.0c00086>
- Chen, H., Wang, C., Kang, H., Zhi, B., Haynes, C. L., Aburub, A., & Sun, C. C. (2020). Microstructures and pharmaceutical properties of ferulic acid agglomerates prepared by different spherical crystallization methods.

- International Journal of Pharmaceutics*, 574, 118914.  
<https://doi.org/10.1016/j.ijpharm.2019.118914>
- Chen, H., Wang, C., & Sun, C. C. (2019). Profoundly Improved Plasticity and Tableability of Griseofulvin by in Situ Solvation and Desolvation during Spherical Crystallization. *Crystal Growth and Design*, 19(4), 2350–2357.  
<https://doi.org/10.1021/acs.cgd.9b00053>
- Chen, X., Li, D., Deng, Z., & Zhang, H. (2020). Ketoconazole: Solving the Poor Solubility via Cocrystal Formation with Phenolic Acids. *Crystal Growth and Design*, 20(10), 6973–6982. <https://doi.org/10.1021/acs.cgd.0c01014>
- Dalvadi, H., Parmar, K., & Yadav, S. (2019). Spherical agglomeration to improve dissolution and micromeritic properties of an anticancer drug, Bicalutamide. *Drug Development and Industrial Pharmacy*, 45(6), 968–980.  
<https://doi.org/10.1080/03639045.2019.1585447>
- Fitriani, L., Firdaus, W. A., Sidadang, W., Rosaini, H., Putra, O. D., Oyama, H., Uekusa, H., & Zaini, E. (2022). Improved Solubility and Dissolution Rate of Ketoprofen by the Formation of Multicomponent Crystals with Tromethamine. *Crystals*, 12(2). <https://doi.org/10.3390/cryst12020275>
- Indra, I., Azahra, R., & Yulianti, R. (2022). Particle Design of Ketoconazole By Spherical Crystallization. *International Journal of Applied Pharmaceutics*, 14(Special Issue 4), 101–105. <https://doi.org/10.22159/ijap.2022.v14s4.PP18>
- Indra, I., Janah, F. M., & Aryani, R. (2019). Enhancing the Solubility of Ketoconazole via Pharmaceutical Cocrystal. *Journal of Physics: Conference Series*, 1179(1). <https://doi.org/10.1088/1742-6596/1179/1/012134>
- Inkson, B. J. (2016). Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM) for Materials Characterization. In *Materials Characterization Using Nondestructive Evaluation (NDE) Methods*. Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-100040-3.00002-X>
- Kawashima, Y. (1984). Development of spherical crystallization technique and its application to pharmaceutical systems. *Archives of Pharmacal Research*, 7(2), 145–151. <https://doi.org/10.1007/BF02856629>
- Kovačič, B., Vrečer, F., & Planinšek, O. (2012). Spherical crystallization of drugs.

*Acta Pharmaceutica*, 62(1), 1–14. <https://doi.org/10.2478/v10007-012-0010-5>

- Kumar, A., Singh, P., & Nanda, A. (2020). Hot stage microscopy and its applications in pharmaceutical characterization. *Applied Microscopy*, 50(1). <https://doi.org/10.1186/s42649-020-00032-9>
- Maheshwari, R., Todke, P., Kuche, K., Raval, N., & Tekade, R. K. (2018). Micromeritics in Pharmaceutical Product Development. In *Dosage Form Design Considerations: Volume I*. <https://doi.org/10.1016/B978-0-12-814423-7.00017-4>
- Martin, F. A., Pop, M. M., Borodi, G., Filip, X., & Kacso, I. (2013). Ketoconazole salt and co-crystals with enhanced aqueous solubility. *Crystal Growth and Design*, 13(10), 4295–4304. <https://doi.org/10.1021/cg400638g>
- Mohamed, M. A., Jaafar, J., Ismail, A. F., Othman, M. H. D., & Rahman, M. A. (2017). Fourier Transform Infrared (FTIR) Spectroscopy. In *Membrane Characterization*. Elsevier B.V. <https://doi.org/10.1016/B978-0-444-63776-5.00001-2>
- Nascimento, A. L. C. S., Fernandes, R. P., Charpentier, M. D., ter Horst, J. H., Caires, F. J., & Chorilli, M. (2021). Co-crystals of non-steroidal anti-inflammatory drugs (NSAIDs): Insight toward formation, methods, and drug enhancement. *Particuology*, 58, 227–241. <https://doi.org/10.1016/j.partic.2021.03.015>
- Nguyen, J. N. T., & Harbison, A. M. (2017). Scanning electron microscopy sample preparation and imaging. *Methods in Molecular Biology*, 1606, 71–84. [https://doi.org/10.1007/978-1-4939-6990-6\\_5](https://doi.org/10.1007/978-1-4939-6990-6_5)
- Pagire, S. K., Korde, S. A., Whiteside, B. R., Kendrick, J., & Paradkar, A. (2013). Spherical crystallization of carbamazepine/saccharin co-crystals: Selective agglomeration and purification through surface interactions. *Crystal Growth and Design*, 13(10), 4162–4167. <https://doi.org/10.1021/cg400804x>
- Paul, S., Wang, C., Wang, K., & Sun, C. C. (2019). Reduced Punch Sticking Propensity of Acesulfame by Salt Formation: Role of Crystal Mechanical Property and Surface Chemistry. *Molecular Pharmaceutics*, 16(6), 2700–

2707. <https://doi.org/10.1021/acs.molpharmaceut.9b00247>
- Properties, M., & Drugs, O. F. (2020). *Spherical Agglomeration Technique : A Innovative Engineering Perspective For Improvement Of*. 9(5), 2163–2183. <https://doi.org/10.20959/wjpr20205-17464>
- Ravouru, N., Penjuri, S. C. B., Damineni, S., Muni, R. L., & Poreddy, S. R. (2018). Preparation and in vitro evaluation of ibuprofen spherical agglomerates. *Turkish Journal of Pharmaceutical Sciences*, 15(1), 7–15. <https://doi.org/10.4274/tjps.09609>
- Ren, S., Liu, M., Hong, C., Li, G., Sun, J., Wang, J., Zhang, L., & Xie, Y. (2019). The effects of pH, surfactant, ion concentration, cofomer, and molecular arrangement on the solubility behavior of myricetin cocrystals. *Acta Pharmaceutica Sinica B*, 9(1), 59–73. <https://doi.org/10.1016/j.apsb.2018.09.008>
- Saganowska, P., & Wesolowski, M. (2018). DSC as a screening tool for rapid co-crystal detection in binary mixtures of benzodiazepines with co-formers. *Journal of Thermal Analysis and Calorimetry*, 133(1), 785–795. <https://doi.org/10.1007/s10973-017-6858-3>
- Savjani, K. T., Gajjar, A. K., & Savjani, J. K. (2012). Drug Solubility: Importance and Enhancement Techniques. *ISRN Pharmaceutics*, 2012(100 mL), 1–10. <https://doi.org/10.5402/2012/195727>
- Shayanfar, A., & Jouyban, A. (2014). Physicochemical characterization of a new cocrystal of ketoconazole. *Powder Technology*, 262, 242–248. <https://doi.org/10.1016/j.powtec.2014.04.072>
- Shekunov, B., & Montgomery, E. R. (2016). Theoretical Analysis of Drug Dissolution: I. Solubility and Intrinsic Dissolution Rate. *Journal of Pharmaceutical Sciences*, 105(9), 2685–2697. <https://doi.org/10.1016/j.xphs.2015.12.006>
- Šimek, M., Grünwaldová, V., & Kratochvíl, B. (2016). Hot-stage microscopy for determination of API fragmentation: comparison with other methods. *Pharmaceutical Development and Technology*, 21(5), 583–589. <https://doi.org/10.3109/10837450.2015.1026608>

- Sodeifian, G., Sajadian, S. A., Razmimanesh, F., & Hazaveie, S. M. (2021). Solubility of Ketoconazole (antifungal drug) in SC-CO<sub>2</sub> for binary and ternary systems: measurements and empirical correlations. *Scientific Reports*, *11*(1), 1–13. <https://doi.org/10.1038/s41598-021-87243-6>
- Solikhati, A., Rahmawati, R. P., & Kurnia, S. D. (2022). Analisis Mutu Fisik Granul Ekstrak Kulit Manggis Dengan Metode Granulasi Basah. *Indonesia Jurnal Farmasi*, *7*(1), 1. <https://doi.org/10.26751/ijf.v7i1.1421>
- Song, Y., Cong, Y., Wang, B., & Zhang, N. (2020). Applications of Fourier transform infrared spectroscopy to pharmaceutical preparations. *Expert Opinion on Drug Delivery*, *17*(4), 551–571. <https://doi.org/10.1080/17425247.2020.1737671>
- Stefanov, B. (2015). Photocatalytic TiO<sub>2</sub> thin films for air cleaning. In *Science and Technology* (Issue January). <https://uu.diva-portal.org/smash/get/diva2:862338/FULLTEXT01.pdf>
- Sulaiman, T. N. S., & Sulaiman, S. (2020). Review: Eksipien Untuk Pembuatan Tablet Dengan Metode Kempa Langsung. *Journal of Pharmaceutical And Sciences*, *3*(2), 64–76. <https://doi.org/10.36490/journal-jps.com.v3i2.44>
- Teleki, A., Nylander, O., & Bergström, C. A. S. (2020). Intrinsic dissolution rate profiling of poorly water-soluble compounds in biorelevant dissolution media. *Pharmaceutics*, *12*(6). <https://doi.org/10.3390/pharmaceutics12060493>
- Thakral, N. K., Zanon, R. L., Kelly, R. C., & Thakral, S. (2018). Applications of Powder X-Ray Diffraction in Small Molecule Pharmaceuticals: Achievements and Aspirations. *Journal of Pharmaceutical Sciences*, 1–14. <https://doi.org/10.1016/j.xphs.2018.08.010>
- Thayyil, A. R., Juturu, T., Nayak, S., & Kamath, S. (2020). Pharmaceutical Co-crystallization: Regulatory aspects, design, characterization, and applications. *Advanced Pharmaceutical Bulletin*, *10*(2), 203–212. <https://doi.org/10.34172/apb.2020.024>
- Thenge, R. R., Chandak, M. P., & Adhao, V. S. (2020). Spherical Crystallization: A Tool to Improve the Physicochemical Properties of APIs. *Asian Journal of Pharmaceutical Research and Development*, *8*(3), 104–110.

<https://doi.org/10.22270/ajprd.v8i3.727>

- Vasoya, J. M., Shah, A. V., & Serajuddin, A. T. M. (2019). Investigation of possible solubility and dissolution advantages of cocrystals, I: Aqueous solubility and dissolution rates of ketoconazole and its cocrystals as functions of pH. *ADMET and DMPK*, 7(2), 106–130. <https://doi.org/10.5599/admet.661>
- Videc, D., Planinšek, O., & Lamešić, D. (2020). Design of Experiments for Optimization of the Lactose Spherical Crystallization Process. *Journal of Pharmaceutical Sciences*, 109(9), 2774–2786. <https://doi.org/10.1016/j.xphs.2020.04.024>
- Wouters, J., Rome, S., & Quéré, L. (2011). Monographs of most Frequent Co-Crystal Formers. In *Pharmaceutical Salts and Co-crystals*. <https://doi.org/10.1039/9781849733502-00338>
- Yadav, J. P., Yadav, R. N., Uniyal, P., Chen, H., Wang, C., Sun, C. C., Kumar, N., Bansal, A. K., & Jain, S. (2020). Molecular Interpretation of Mechanical Behavior in Four Basic Crystal Packing of Isoniazid with Homologous Cocrystal Formers. *Crystal Growth and Design*, 20(2), 832–844. <https://doi.org/10.1021/acs.cgd.9b01224>
- Yu, H., Zhang, L., Liu, M., Yang, D., He, G., Zhang, B., Gong, N., Lu, Y., & Du, G. (2023). Enhancing Solubility and Dissolution Rate of Antifungal Drug Ketoconazole through Crystal Engineering. *Pharmaceuticals*, 16(10), 1–16. <https://doi.org/10.3390/ph16101349>