

## DAFTAR PUSTAKA

1. Sharma G, Saini MK, Thakur K, Kapil N, Garg NK, Raza K, et al. Aceclofenac Cocrystal Nanoliposomes for Rheumatoid Arthritis with Better Dermatokinetic Attributes: a Preclinical Study. *Nanomedicine*. 2017;12(6):615–38.
2. Kumar S, Gupta A, Mishra C, Singh S. Synthesis, Characterization and Performance Evaluation of Aceclofenac-Urea Cocrystals. *Indian Journal of Pharmaceutical Sciences*. 2020;82(5):881–90.
3. Patel J, Basu B, Dharamsi A, Garala K, Raval M. Solubility of Aceclofenac in Polyamidoamine Dendrimer Solutions. *International Journal of Pharmaceutical Investigation*. 2011;1(3):135.
4. Brogden RN, Wiseman LR. Aceclofenac. *Drugs*. 1996 Jul;52(1):113–24.
5. O'Malley B. European Pharmacopoeia. In: *British Medical Journal*. 1971. p. 815.
6. National Center for Biotechnology Information. PubChem Compound Summary for CID 71771, Aceclofenac. Feb. 8, 2022. 2022 Feb 8;
7. Sevukarajan M, Thanuja B, Sodanapalli R, Nair R. Synthesis and Characterization of a Pharmaceutical Co-Crystal:(Aceclofenac:Nicotinamide). *Journal of Pharmaceutical Sciences and Research*. 2011;3(6):1288–93.
8. Varshosaz J, Talari R, Mostafavi SA, Nokhodchi A. Dissolution Enhancement of Gliclazide Using In Situ Micronization By Solvent Change Method. *Powder Technology*. 2008 Nov;187(3):222–30.
9. Pekamwar SS, Kulkarni DA. Development and Evaluation Of Bicomponent Cocrystals Of Aceclofenac For Efficient Drug Delivery With Enhanced Solubility And Improved Dissolution. *Indian Drugs*. 2021;58(8):54–60.
10. Maulvi FA, Dalwadi SJ, Thakkar VT, Soni TG, Gohel MC, Gandhi TR. Improvement Of Dissolution Rate Of Aceclofenac By Solid Dispersion Technique. *Powder Technology*. 2011 Feb;207(1–3):47–54.
11. Patnaik S, Aditha SK, Rattan T, Kamiseti V. Aceclofenac-Soluplus & Nanocomposites for Increased Bioavailability. *Soft Nanoscience Letters*. 2015;05(02):13–20.
12. Rahim H, Sadiq A, Khan S, Khan MA, Shah SMH, Hussain Z, et al. Aceclofenac Nanocrystals With Enhanced In Vitro, In Vivo Performance: Formulation Optimization, Characterization, Analgesic and Acute Toxicity Studies. *Drug Design, Development and Therapy*. 2017;11:2443–52.
13. Setyawan, Dwi dan Putri D. Strategi Peningkatan Kelarutan Bahan Aktif Farmasi. 2019;(September):80, 126–31.

14. Putra OD, Furuishi T, Yonemochi E, Terada K, Uekusa H. Drug-Drug Multicomponent Crystals as an Effective Technique to Overcome Weaknesses in Parent Drugs. *Crystal Growth and Design*. 2016;16(7):3577–81.
15. Alatas F, Abdul Azizsidq F, Hartiana Sutarna T, Ratih H, Nuroso Soewandhi S. Perbaikan Kelarutan Albendazol Melalui Pembentukan Kristal Multikomponen dengan Asam Malat. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)*. 2020;6(1):114–23.
16. Setyawan D, Pravianti ERD, Pratiwi KD, Isadiartuti D, Paramita DP. Cocrystallization of Loratadine With Succinic Acid Using Neat Grinding Method. *SSRN Electronic Journal*. 2019;74–9.
17. Najih YA, Setyawan D, Radjaram A. Pembentukan Kokristal Ketokonazol-Asam Suksinat Yang Dibuat Dengan Metode Penggilingan (Grinding). *Journal of Pharmacy Science and Technology*. 2018;1(1):8.
18. Weyna DR, Shattock T, Vishweshwar P, Zaworotko MJ. Synthesis and Structural Characterization of Cocrystals and Pharmaceutical Cocrystals: Mechanochemistry vs Slow Evaporation From Solution. *Crystal Growth and Design*. 2009;9(2):1106–23.
19. Karagianni A, Malamatari M, Kachrimanis K. Pharmaceutical Cocrystals: New solid Phase Modification Approaches For The Formulation of API. *Pharmaceutics*. 2018;10(1):1–30.
20. Rs EN. Aceclofenac. 2018. 1740–1742 p.
21. Goud NR SKNA. Solubility and stability advantage of aceclofenac sal. 2013;4:1590–601.
22. Sagar K. Formulation and Evaluation of Aceclofenac Sustained Released Tablet. *World journal of pharmacy and pharmaceutical sciences* . 2018;5(3):1394–405.
23. Dooley M, Spencer CM, Dunn CJ. Aceclofenac: A Reappraisal of Its Use In The Management Of Pain and Rheumatic Disease. *Drugs*. 2001;61(9):1351–78.
24. National Center for Biotechnology Information. PubChem Compound Succinic Acid. Accessed Feb. 15, 2022. 2022.
25. Wicaksono Y, Setyawan D, Siswandono. Phase Diagram and Thermodynamic Properties of Ketoprofen-Succinic Acid Binary Mixtures. 2018 Jul;19(2):99–104.
26. Fuliaş A, Vlase G, Vlase T, Şuta LM, Şoica C, Ledeti I. Screening and Characterization of Cocrystal Formation Between Carbamazepine And Succinic Acid. *Journal of Thermal Analysis and Calorimetry*. 2015 Sep 19;121(3):1081–6.
27. Zaini E, Afriyani, Fitriani L, Ismed F, Horikawa A, Uekusa H. Improved Solubility and Dissolution Rates in Novel Multicomponent Crystals of Piperine With Succinic Acid. *Scientia Pharmaceutica*. 2020 Apr 13;88(2):21.

28. Lin HL, Wu TK, Lin SY. Screening and Characterization of Cocrystal Formation of Metaxalone With Short-Chain Dicarboxylic Acids Induced By Solvent-Assisted Grinding Approach. *Thermochimica Acta*. 2014 Jan;575:313–21.
29. Iyan. *Kokristalisasi: Modifikasi Padatan Farmasi Sebagai Strategi Perbaikan Sifat Fisikokimia Obat*. Yogyakarta: Dee Publish ; 2020.
30. Tilborg A, Norberg B, Wouters J. Pharmaceutical Salts and Cocrystals Involving Amino Acids: A Brief Structural Overview of The State of Art. *European Journal of Medicinal Chemistry* [Internet]. 2014;74:411–26. Available from: <http://dx.doi.org/10.1016/j.ejmech.2013.11.045>
31. Cherukuvada S, Kaur R, Guru Row TN. Cocrystallization and Small Molecule Crystal Form Diversity: From Pharmaceutical to Materials Applications. *CrystEngComm*. 2016;18(44):8528–55.
32. Hornedo RN, Nehm JS, Jayasankar A. *Cocrystals: Design, Properties and Formation Mechanisms*. 4th ed. Swarbrick J, editor. 2015. 19 p.
33. Ferdiansyah R, Ardiansyah AS, Rachmaniar R, Yuniar I. Review: The Effect of Cocrystal Formation Using Carboxylic Acid Coformer With Solvent Evaporation and Solvent Drop Grinding Methods on Bioavailability of Active Substances. *Jurnal Ilmiah Farmako Bahari*. 2021;12(1):28–38.
34. Thakuria R, Delori A, Jones W, Lipert MP, Roy L, Rodríguez-Hornedo N. Pharmaceutical Cocrystals and Poorly Soluble Drugs. *International Journal of Pharmaceutics*. 2013 Aug;453(1):101–25.
35. Qiao N, Li M, Schlindwein W, Malek N, Davies A, Trappitt G. Pharmaceutical Cocrystals: An Overview. *International Journal of Pharmaceutics*. 2011 Oct;419(1–2):1–11.
36. Sopyan I, Insan. Systematic Review: Cocrystal as Efforts to Improve Physicochemical and Bioavailability Properties of Oral Solid Dosage Form. *International Journal of Applied Pharmaceutics*. 2021 Jan 7;43–52.
37. Shaikh R, Singh R, Walker GM, Croker DM. Pharmaceutical Cocrystal Drug Products: An Outlook on Product Development. *Trends in Pharmacological Sciences*. 2018 Dec;39(12):1033–48.
38. Permatasari D, Ramadhani S, Sopyan I. Ko-Kristal: Teknik Pembuatan Ko-Kristal. *Farmaka* [Internet]. 2016;14(4):98–115. Available from: <http://jurnal.unpad.ac.id/farmaka/article/view/10461/5073>
39. Ferdiansyah R, Aulia S, Rachmaniar R. Review : The Effect of Cocrystal Formation Using Carboxylic Acid Coformer With Solvent Evaporation and Solvent Drop Grinding Methods on Bioavailability of Active Substances. *jurnal ilmiah farmako bahari*. 2021 Jan 8;12(1):28–38.

40. Bhogala BR, Basavoju S, Nangia A. Tape and Layer Structures in Cocrystals of Some and Tricarboxylic Acids With 4,4'-Bipyridines and Isonicotinamide from Binary to Ternary Cocrystals. *CrystEngComm*. 2005;7(90):551.
41. Clarke HD. *Crystal Engineering of Multi-Component Crystal Forms: The Opportunities and Challenges in Design*. ProQuest Dissertations and Theses. 2012;(January):153.
42. Khankari RK, Grant DJW. Pharmaceutical hydrates. *Thermochimica Acta*. 1995 Jan;248:61–79.
43. Aaltonen J, Alleso, Mirza. Solid Form Screening – A review. *European Journal of Pharmaceutics and Biopharmaceutics*. 2009 Jan;71(1):23–37.
44. Chavan RB, Shastri NR. Overview of Multicomponent Solid Forms. *Journal of Nanotoxicology and Nanomedicine*. 2018 Jan;3(1):23–48.
45. B.B Patra, Biswajit S. *Engineering Chemistry I*. Yadav A, editor. India; 2011.
46. Davis RE LKWMRJ. Studies of Relationship in Cocrystal Systems. *Am Crystallogr Assoc Trans*. 2004;39:41–61.
47. Sathisaran I, Dalvi S. Engineering Cocrystals of Poorly Water-Soluble Drugs to Enhance Dissolution in Aqueous Medium. *Pharmaceutics*. 2018 Jul 31;10(3):108.
48. Setyawan D, Oktavia IP, Farizka R, Sari R. Physicochemical Characterization and In Vitro Dissolution Test of Quercetin-Succinic Acid Co-crystals Prepared Using Solvent Evaporation. *The Turkish Journal of Pharmaceutical Sciences*. 2017 Nov 20;280–4.
49. Setiabudi A. *Karakterisasi Material Prinsip dan Aplikasi Dalam Penelitian Kimia*. Bandung: UPI PRESS; 2012. 1–146 p.
50. Patel DJ, Puranik PK. Pharmaceutical Co-crystal : An Emerging Technique to Enhance Physicochemical Properties of Drugs. *International Journal of ChemTech Research*. 2020;13(3):283–90.
51. Sari YN, Zaini E, Ismed F. Peningkatan Laju Disolusi Piperine dengan Pembentukan Multikomponen Kristal Menggunakan Asam Nikotinat. *Jurnal Sains Farmasi & Klinis*. 2019 Aug 28;6(2):180.
52. Kementerian Kesehatan Republik Indonesia. *Farmakope Indonesia Edisi VI 2020*. VI. Vol. 615.1. Jakarta: Kementerian Kesehatan RI. Direktorat Jenderal f Kefarmasian dan Alat Kesehatan; 2020. 1–2371 p.
53. Zaini E, Setyawan D. *Polimorf Bahan Aktif Farmasi*. In: 1st ed. Surabaya: Airlangga University Press; 2018. p. 1–69.
54. Sulistyani M, Huda N. Optimasi Pengukuran Spektrum Vibrasi Sampel Protein Menggunakan Spektrofotometer Fourier Transform Infrared (FT-IR). *Journal Chem*. 2017 Aug;6(2):1–8.

55. Setianingsih, Prananto. Spektroskopi Inframerah. Malang: UB Press; 2020. 1–136 p.
56. Dachriyanus. Analisis Struktur Senyawa Organik Secara Spektroskop. PADANG: Lembaga Pengembangan Teknologi Informasi dan Komunikasi (LPTIK); 2004. 1–158 p.
57. Bazzo GC, Pezzini BR, Stulzer HK. Eutectic mixtures as an Approach to Enhance Solubility, Dissolution Rate and Oral Bioavailability of Poorly Water Soluble Drugs. *International Journal of Pharmaceutics*. 2020 Oct;588:119741.
58. Moribe K, Higashi K. Nanocrystal Formulation of Poorly Water-Soluble Drug. *Drug Delivery System*. 2015;30(2):92–9.
59. In Rahmi F. Isolasi dan Formulasi Nanopartikel Kolagen dari Kulit dan Sisik Ikan Kakap Merah. 2017.
60. Abdullah M, Khairurrijal. Karakterisasi Nanomaterial. *Jurnal Nanosains & Nanoteknologi*. 2009;2(1):1–10.
61. Felton L. Remington Essential of Pharmaceutics. In: *Pharmaceutical Press* 2012, editor. 2012. p. 1–783.
62. Shargel L, Wu-pong S, B.Andrew. *Applied Biopharmaceutical and Pharmacokinetic*. Seventh Ed. Mc Graw, editor. New York: 2012; 2012.
63. Fudholi A. Disolusi dan Pelepasan Obat In Vitro. In: Fudholi A, editor. 1st ed. Yogyakarta: Pustaka Pelajar; 2013. p. 32–50.
64. Susanti I. Pengaruh Medium Disolusi dan Upaya Peningkatan Permeabilitas Metformin. 2019 Feb;1–10.
65. Permata SD, Sulaiman Saifullah, Mafruhah ratna, okti. Uji Disolusi Terbanding Tablet Metformin Hidroklorida Berlogo dan Bermerek. *Majalah Farmaseutik*. 2013;9(1):1–5.
66. Hairunnisa, Sopyan I, Gozali D. Cocrystal : Nicotinamid as The Coformer. *Jurnal Ilmiah Farmako Bahari*. 2019 Jul;10(2):1–10.
67. Zaini E, Halim A, Soewandhi SN, Dwi Setyawan. Peningkatan Laju Pelarutan Trimetoprim Melalui Metode Ko-Kristalisasi dengan Nikotinamida. *Jurnal Farmasi Indonesia*. 2011;5(July):206–12.
68. Papich MG, Martinez MN. Applying Biopharmaceutical Classification System (BCS) Criteria to Predict Oral Absorption of Drugs in Dogs: Challenges and Pitfalls. *The AAPS Journal*. 2015 Jul 29;17(4):948–64.
69. Bolla G, Sanphui P, Nangia A. Solubility Advantage of Tenoxicam Phenolic Cocrystals Compared to Salts. *Crystal Growth and Design*. 2013;13(5):1988–2003.
70. Yoga W, Hendriani R. Review : Teknik Peningkatan Kelarutan Obat. *Farmaka*. 2017;4(4):1–13.

71. Sagala RJ. Review: Metode Peningkatan Kecepatan Disolusi Dikombinasi Dengan Penambahan Surfaktan. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)*. 2019 Apr 2;5(1):84–92.
72. kadam S, Shinkar DM, Saudagar RB. Review on solubility enhancement techniques. *Int J Pharm Bio Sci*. 2013 Oct;3(3):462–75.
73. Hokcu. *Troubleshooting Dalam Analisis Spektrofotometer UV-VIS*. 1st ed. Korry, editor. Vol. 1. Jawa Barat: RCI; 2022. 4–11 p.
74. Harmita. Petunjuk Pelaksanaan Validasi Metode dan Cara Perhitungannya. *Majalah Ilmu Kefarmasian* . 2004;1(3):117–35.
75. Rohman A. *Validasi dan Penjaminan Mutu Metode Analisis Kimia*. Yogyakarta: Gadjah Mada University Press; 2016.
76. Riyanto. *Validasi dan Verifikasi Metode Uji*. Yogyakarta: Deepublish; 2019.
77. Friscic T. The Role of Solvent in Mechanochemical and Sonochemical Cocrystal Formation: A Solubility Based Approach for Predicting Cocrystallisation Outcome. Vol. 11. *CrystEngComm*; 2008. 418–426 p.
78. Martin A BPCA. *Physical Pharmacy*. 4, editor. Philadelphia; 1993.
79. Council of Europe. *European Pharmacopoeia 6.0*. Vol. 6.0. The Stationery Office/Tso; 6th edition; 2007.
80. Sipos E, Kósa N, Kazsoki A, Szabó ZI, Zelkó R. Formulation and Characterization of Aceclofenac-Loaded Nanofiber Based Orally Dissolving Webs. *Pharmaceutics*. 2019 Aug 17;11(8):417.
81. Silfia. Analysis of Functional Groups, Distribution, and Particle Size of Stamp Ink From Gambier (*Uncaria gambir* Roxb) With NaOH and Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> Complexing Compounds. *Jurnal Litbang Industri*. 2019;9.
82. Parida KR. Microparticles Based Drug Delivery Systems: Preparation and Application in Cancer Therapeutics. *International Archive of Applied Sciences and Technology*. 2013;4(3):68–75.
83. Riyanto. *Validasi dan Verifikasi Sesuai dengan ISO/IEC 17025 Laboratorium Pengujian dan Kalibrasi*. Deepublish, editor. 2014.
84. Nicoli S, Bilzi S, Santi P, Caira MR, Li J, Bettini R. Ethyl-Paraben and Nicotinamide Mixtures: Apparent Solubility Thermal Behavior and X-ray Structure of the 1:1 Co-crystal. *Journal of Pharmaceutical Sciences*. 2008 Nov;97(11):4830–9.