

DAFTAR PUSTAKA

1. Chawla G, Ranjan C, Kumar J, Siddiqui AA. Chemical Modifications of Ketoprofen (NSAID) in Search of Better Lead Compounds: A Review of Literature From 2004-2016. *Antiinflamm Antiallergy Agents Med Chem* [Internet]. 2017;15 3:154–77.
2. Gigante A, Tagarro I. Non-Steroidal Anti-Inflammatory Drugs and Gastroprotection with Proton Pump Inhibitors. *Clin Drug Investig*. 2012 221–33.
3. Shohin I, Kulinich J, Ramenskaya G, Vasilenko G. Evaluation of In Vitro Equivalence for Drugs Containing BCS Class II Compound Ketoprofen. *Dissolut Technol*. 2011.
4. Jessica A, YASA S, Zaini E, Fitriani L. Increased Dissolution Rate Of Aceclofenac by Formation of Multicomponent Crystals With L-Glutamine. *International Journal of Applied Pharmaceutics*. 2024. 45–52.
5. Bertoni S, Albertini B, Passerini N. Investigating the physicochemical properties of solid dispersions based on semicrystalline carriers: A case study with ketoprofen. *Int J Pharm*. 2022.
6. Das SK, Chakraborty S, Bose A, Rajabalaya R, Khanam J. Effects of the preparation technique on the physicochemical characteristics and dissolution improvement of ketoprofen-SBE7- β -CD binary inclusion complexes. *Colloids Surf a Physicochem Eng Asp* [Internet]. 2020;125775.
7. Aher SJ, Patil PP, Patwekar M, Patwekar F. *European Journal of Molecular & Clinical Medicine Formulation and Evaluation of ketoprofen nanosuspension. Original Research Article*. 2022;
8. Fitriani L, Firdaus W, Sidadang W, Rosaini H, Putra O, Oyama H, et al. Improved Solubility and Dissolution Rate of Ketoprofen by the Formation of Multicomponent Crystals with Tromethamine. *Crystals (Basel)*. 2022.
9. Sonita H, Umar S, Zaini E. Preparasi dan Karakterisasi Sifat Fisikokimia Multikomponen Ketoprofen dengan Koformer Proline. *JOPS (Journal of Pharmacy and Science)*. 2023 79–88.
10. Syamdini C, Muthiah I, Ainurofiq A. Validation of UV spectrophotometric method for ketoprofen multicomponent crystals with malic acid and tartaric acid. *J Phys Conf Ser*. 2022 2190-12034.
11. Pimparade MB, Vo A, Maurya AS, Bae J, Morott JT, Feng X, et al. Development and evaluation of an oral fast disintegrating anti-allergic film using hot-melt extrusion technology. *European Journal of Pharmaceutics and Biopharmaceutics* [Internet]. 2017; 81–90.
12. Dixit A, Kulkarni P, Shivakumar H. Gels and Jellies as a Dosage Form for Dysphagia Patients: A Review. *Curr Drug ther*. 2011 79–86.
13. Panda B, Dey NS, Rao MEB. Development of Innovative Orally Fast Disintegrating Film Dosage Forms: A Review. *Int J Pharm Sci Nanotech*. 2012. 1666–74.
14. Irfan M, Rabel S, Bukhtar Q, Qadir MI, Jabeen F, Khan A. Orally disintegrating films: A modern expansion in drug delivery system. Vol. 24, *Saudi Pharmaceutical Journal*. Elsevier B.V.; 2016. p. 537–46.

15. Guarve K, Kriplani P. HPMC- A Marvel Polymer for Pharmaceutical Industry-Patent review. *Recent Adv Drug Deliv Formul.* 2021 Oct;15.
16. Ito I, Ito A, Unezaki S. Fundamental Discussion on Preparation of an Oral Acetaminophen Film that is Expected to Improve Medication Administration: Effects of Plasticizer and Polymer on an Oral Film. *Iryo Yakugaku (Japanese Journal of Pharmaceutical Health Care and Sciences).* 2016 :237–45.
17. Sharma D, Kaur D, Verma S, Singh D, Singh M, Singh G, et al. Fast Dissolving Oral Films Technology: A Recent Trend for an Innovative Oral Drug Delivery System. *International Journal of Drug Delivery.* 2015. 60–75.
18. Mostafa D. FAST DISSOLVING ORAL FILM: OVERVIEW. 2018.
19. Radhika Reddy M. An Introduction to Fast Dissolving Oral Thin Film Drug Delivery Systems: A Review. 2020.
20. Kemenkes RI. *Farmakope Indonesia Edisi Vi.* 6th ed. Kementerian Kesehatan RI; 2020.
21. Kuczyńska J, Nieradko-Iwanicka B. Future prospects of ketoprofen in improving the safety of the gastric mucosa. *Biomedicine & Pharmacotherapy [Internet].* 2021.
22. Nugrahani I, Parwati RD. Challenges and progress in nonsteroidal anti-inflammatory drugs co-crystal development. Vol. 26, *Molecules.* MDPI AG; 2021.
23. Alatas F, Ratih H, Kurnia H, Soewandhi S. Solubility Enhancement of Clozapine Through Co-Crystal Formation with Isonicotinamide. *Indonesian Journal of Pharmaceutics.* 2019 Aug;2.
24. Kumar L, Pattnaik G, Satapathy B, Patro C, Naik S, Dash AK, et al. Solubility Enhancement Techniques: Updates And Prospectives. *J Pharm Negat Results.* 2022 Aug;13(8):2022.
25. Kaur P, Garg R. Oral dissolving film: present and future aspects. *Journal of Drug Delivery and Therapeutics.* 2018 :373–7.
26. National Center for Biotechnology Information. PubChem Compound Summary for CID 6503, Tromethamine. Retrieved September 4, 2024 from <https://pubchem.ncbi.nlm.nih.gov/compound/Tromethamine>. 2024;
27. Novak KM, et. al. *Drug Facts and Comparisons* 59th Edition 2005. Wolters Kluwer Health. St. Louis, Missouri 2005., p. 13. 59th ed. St. Louis, Missouri: Wolters Kluwer Health; 2005. 130 p.
28. Putri D. Review: Multi-Component Crystals: Cinnamic Acid as a Co-Former. *International Journal of Pharmaceutical Sciences and Medicine.* 2021 Jan 21;6(1):92–8.
29. Zaini E, Haq AD, Umar S. Literature Review: Multicomponent Crystal of Active Pharmaceutical Ingredients to Improve the Solubility: A Literature Review. *Jurnal Proteksi Kesehatan.* 2023;12(2):114–20.
30. Kumar S, Nanda A. Pharmaceutical Cocrystals: An Overview. *Indian J Pharm Sci.* 2017 Sep;79.
31. Nurismi E, Rosaini H, Octavia MD. Review: Effect of Different Methods on the Multicomponents Crystal Formation from Medicinal Natural Ingredient Compounds. *International Journal of Pharmaceutical Sciences and Medicine.* 2021 :32–9.

32. Gupta D, Bhatia D, Dave V, Sutariya V, Gupta S. Salts of Therapeutic Agents: Chemical, Physicochemical, and Biological Considerations. *Molecules*. 2018 :1719.
33. Vemuri V, Srinivas L. Insight into Concept and Progress on Pharmaceutical Co-Crystals: An overview. *Indian Journal of Pharmaceutical Education and Research*. 2019. 522–38.
34. Singh M, Barua H, Jyothi VGSS, Dhondale MR, Nambiar AG, Agrawal AK, et al. Cocryystals by Design: A Rational Coformer Selection Approach for Tackling the API Problems. Vol. 15, *Pharmaceutics*. Multidisciplinary Digital Publishing Institute (MDPI); 2023.
35. Wang X, Du S, Zhang R, Jia X, Yang T, Zhang X. Drug-drug cocryystals: Opportunities and challenges. *Asian J Pharm Sci* [Internet]. 2021;16(3):307–17.
36. Nugrahani I, Jessica MA. Amino acids as the potential co-former for co-crystal development: A review. Vol. 26, *Molecules*. MDPI AG; 2021.
37. Bag P. Pharmaceutical co-crystals: A green way to enhance drug stability and solubility for improved therapeutic efficacy. 2023 Sep;
38. Pawar N, Saha A, Nandan N, Parambil J V. Solution CocrySTALLIZATION: A Scalable Approach for CocrySTAL Production. *Crystals* (Basel) [Internet]. 2021;11(3).
39. Rodrigues M, Baptista B, Lopes J, Sarraguça M. Pharmaceutical cocrySTALLIZATION techniques. Advances and challenges. *Int J Pharm*. 2018 Sep;547.
40. Muhaimin M, Latifah N, Chaerunisaa AY, Amalia E, Rostinawati T. Preparation And Characterization Of Sonneratia Alba Leaf Extract Microcapsules By Solvent Evaporation Technique. *International Journal of Applied Pharmaceutics*. 2022 Nov 1;14(6):77–82.
41. Chavan RB, Thipparaboina R, Kumar D, Shastri NR. Co amorphous systems: A product development perspective. Vol. 515, *International Journal of Pharmaceutics*. Elsevier B.V.; 2016. p. 403–15.
42. Patil P, Shrivastava SK. Fast Dissolving Oral Films: An Innovative Drug Delivery System [Internet]. Vol. 3, *International Journal of Science and Research (IJSR)* ISSN. 2012. Available from: www.ijsr.net
43. Muhammad Sultan Ramadhan, Uci Ary Lantika. Kajian Sediaan Orally Dissolving Film (ODF). *Jurnal Riset Farmasi*. 2022 Dec 20;89–96.
44. Pacheco M, Barbieri D, Silva C, de Moraes M. A review on orally disintegrating films (ODFs) made from natural polymers such as pullulan, maltodextrin, starch, and others. *Int J Biol Macromol*. 2021 Sep;178.
45. Fajria T, Nuwarda RF. Teknologi Sediaan Oral Lapis Tipis Terlarut Cepat (Fast Dissolving Film). *Majalah Farmasetika*. 2018. 3:58.
46. Rowe R.C, Sheskey P.J, Quinn M.E. *Handbook of Pharmaceutical Excipients*. sixth. London: Pharmaceutical Press; 2009.
47. Yadav A, Sharma V, Tripathi S, Soni SL. Oral Fast Dissolving Film: A Novel Formulation. *Asian Journal of Pharmaceutical Research and Development* [Internet]. 2020;8(4):77–82.
48. Liew K Bin, Tan Y, Kok-Khiang P. Effect of polymer, plasticizer and filler on orally disintegrating film. *Drug Dev Ind Pharm*. 2013 Sep;40.

49. Bhyan B, Jangra S, Kaur M, Singh H. Orally fast dissolving films: Innovations in formulation and technology. *Int J Pharm Sci Rev Res.* 2011;50–7.
50. Kalyan S, Bansal M. Recent Trends in the Development of Oral dissolving Film. *Int J PharmTech Res.* 2011.
51. Lee Y, Kim K, Kim M, Choi D, Jeong S. Orally disintegrating films focusing on formulation, manufacturing process, and characterization. *J Pharm Investig.* 2017 Oct;47.
52. Chavan G, Kshirsagar T, Jaiswal N. FORMULATION & EVALUATION OF FAST DISSOLVING ORAL FILM. *World J Pharm Res.* 2021 Oct;
53. Amorim A, José Soares E, Pires-de-Souza F. Development and effect of orodispersible film incorporated with Biosilicate for remineralization of dental enamel subjected to cariogenic and erosive challenge. *J Biomed Mater Res B Appl Biomater.* 2024 Oct;112.
54. Hasanah U, Fitriani L, Putri VN, Zaini E. Formulation and evaluation of orally disintegrating film (ODF) containing piperine-succinic acid cocrystal. *Pharmaciana.* 2023 Apr 3;13(1):108.
55. Lakhani P, Bahl R, Bafna P. Transdermal Patches: Physiochemical And In-Vitro Evaluation Methods. *Int J Pharm Sci Res.* 2015 :1826–36.
56. Darusman F, Soewondo BP, Alatas SAMN. A novel and innovative drug delivery system in fast dissolving oral film of glimepiride-betacyclodextrin inclusion complexes. In: *Journal of Physics: Conference Series.* Institute of Physics Publishing; 2020.
57. Putri AN, Fitriah Sekolah Tinggi Kesehatan Borneo Lestari Banjarbaru R. Formulation and Optimization of Bisoprolol Fumarate Orally Fast Dissolving Film with Combination of HPMC E15 and Maltodextrin as Matrix Polymers. [Internet]. *Indonesian Journal of Pharmaceutical Science and Technology Journal Homepage.* 2019.
58. Olechno K, Winnicka K. How to assess orodispersible film quality? A review of applied methods and their modifications. *Acta Pharmaceutica.* 2019 Sep;69.
59. Ode W, Zubaydah S, Handoyo Sahumena M. Fast Dissolving Oral Film Salbutamol Sulfat dengan Menggunakan Polimer HPMC [Internet]. Vol. 2021, *J.Chemom.Pharm.Anal.* 2021.
60. Li K, Castillo A. Formulation and evaluation of a mucoadhesive buccal tablet of mefenamic acid. *Brazilian Journal of Pharmaceutical Sciences.* 2020 Oct;56.
61. Saafrida S, Umar S, Lucida H. Pengembangan dan Validasi Metoda Disolusi Tablet Salut Enterik Ketoprofen. *Jurnal Sains Farmasi & Klinis.* 2023 Jan 27;9(3):285.
62. Edwards AA, Alexander BD. UV-Visible Absorption Spectroscopy, Organic Applications. In: *Encyclopedia of Spectroscopy and Spectrometry.* 2016. p. 511–9.
63. Pratiwi R, Nandiyanto A. How to Read and Interpret UV-VIS Spectrophotometric Results in Determining the Structure of Chemical Compounds. *Indonesian Journal of Educational Research and Technology.* 2022. 2:1–20.

64. Dachriyanus D. Analisis Struktur Senyawa Organik Secara Spektroskopi [Internet]. Padang: Lembaga Pengembangan Teknologi Informasi dan Komunikasi (LPTIK); 2004.
65. Hadi A. Sistem Manajemen Mutu Laboratorium - Sesuai ISO/IEC 17025: 2000 General Requirements for the Competence of Testing and Calibration Laboratories [Internet]. Jakarta: Gramedia Pustaka Utama; 2000. 123 p.
66. Ali H, Hanafy A. Glibenclamide Nanocrystals in a Biodegradable Chitosan Patch for Transdermal Delivery: Engineering, Formulation, and Evaluation. *J Pharm Sci.* 2016 Sep;106.
67. Merck. Certificate of Analysis (Tris(hydroxymethyl)aminomethane). 2013;1–2.
68. Sonita H, Umar S, Zaini E. Preparasi dan Karakterisasi Sifat Fisikokimia Multikomponen Ketoprofen dengan Koformer Proline. *JOPS (Journal Of Pharmacy and Science)*. 2023. 79–88.
69. Jessica A, Amrizal, Hasanah U, Zaini E, Fitriani L. The Formation and Characterization of Multicomponent Crystal Caffeic Acid-Tromethamine Using the Solvent Drop Grinding Technique. In: *Proceedings of the 2nd International Conference on Contemporary Science and Clinical Pharmacy 2021 (ICCSCP 2021)* [Internet]. Atlantis Press; 2021. p. 203–10.
70. Kapoor DU, Singh S, Prajapati BG. Amorphization of Low Soluble Drug with Amino Acids to Improve Its Therapeutic Efficacy: a State-of-Art-Review. *AAPS PharmSciTech.* 2023;24.
71. Kim D, Kim YW, Tin YY, Soe MTP, Ko B, Park S, et al. Recent Technologies for Amorphization of Poorly Water-Soluble Drugs. *Pharmaceutics* [Internet]. 2021;13(8):1318. Available from: <https://www.mdpi.com/1999-4923/13/8/1318>
72. Losev EA, Boldyreva E V. A salt or a co-crystal – when crystallization protocol matters. *CrystEngComm* [Internet]. 2018;20(16):2299–305.
73. Vallabh A, Tsavalas JG. Role of Plasticizers in Film Formation and Deformation-Induced Bonding of Glassy Polymers of Bidisperse Blends. 2024.
74. Wannaphatchaiyong S, Boonme P, Pichayakorn W. Gelatin Films and its Pregelatinized Starch Blends: Effect of Plasticizers. *Key Eng Mater* [Internet]. 2017; 751:230–5.
75. Rajput D, Rajat V, Goyal A. Validation of Analytical Methods for Pharmaceutical Analysis. *International Journal of Pharmaceutical Erudition* www.pharmaerudition.org [Internet]. 2013;3(1):3–4. Available from: www.pharmaerudition.org
76. Umar S, Saafrida S, Lucida H. Validasi Metoda Analisis Penetapan Kadar Ketoprofen pada Tablet Salut Enterik secara Kromatografi Cair Kinerja Tinggi dan Spektrofotometri UV. *Jurnal Sains Farmasi & Klinis.* 2021 Aug 6;8(2):200.
77. International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use. Q2(R1) Validation of Analytical Procedures: Text and Methodology. Geneva; 2005.