

DAFTAR PUSTAKA

1. Direktorat Jenderal Perkebunan Kementerian Pertanian Republik Indonesia. Statistik Perkebunan Non Unggulan Nasional. 2022. 1–538 p.
2. BPS. Luas Lahan dan Produksi Gambir Menurut Kabupaten/Kota di Provinsi Sumatera Barat 2020-2022. 2022.
3. Asuryani, Purwanto YA, Budiastira IW, Syamsu K. Determination of catechin as main bioactive component of gambir (*Uncaria gambir* Roxb) by FT-NIR Spectroscopy. *J Med Plants Res.* 2013;7(41):3076–83.
4. Li N, Taylor LS, Ferruzzi MG, Mauer LJ. Kinetic study of catechin stability: Effects of pH, concentration, and temperature. *J Agric Food Chem.* 2012;60(51):12531–9.
5. Lucida H, Hasani S, Susanti M, Ismed F. Formulation of a gambier catechin-loaded nanophytosome and the MTT assay on HeLa cell lines. *Pharm Educ.* 2023;23(2):19–24.
6. Matsubara T, Wataoka I, Urakawa H, Yasunaga H. High-efficient chemical preparation of catechinone haquadest dyestuff by oxidation of (+)-catechin in water/ethanol mixed solution. *J Fiber Sci Technol.* 2014;70(1):19–22.
7. Rahman ED, Sari E, Burmawi, Frizka, Endah. Determination of Extraction Process Conditions of Gambier Catechin (*Uncaria Gambier* Roxb) from Solok Bio Bio Lima Puluh Kota District - West Sumatera. *IOP Conf Ser Mater Sci Eng.* 2018;316(1).
8. Lucida H, Bakhtiar A, Putri WA. Formulasi Sediaan Antiseptik Mulut dari Katekin Gambir. *J Sains Teknol Farm.* 2007;12(1).
9. Malrianti Y, Kasim A, Asben A, Syafri E, Yeni G, Fudholi A. Catechin extracted from *Uncaria gambier* Roxb for nanocatechin production: Physical and chemical properties. *Int J Des Nat Ecodynamics.* 2021;16(4):393–9.
10. Gadkari PV, Balaraman M. Catechins: Sources, extraction and encapsulation: A review. *Food Bioprod Process.* 2015;93(August 2013):122–38.
11. Nofita L. Penentuan Konstanta Ionisasi (pKa) Katekin Secara Potensiometri. Skripsi. 2006;
12. Poaty B, Dumarçay S, Perrin D. New lipophilic catechin derivatives by oxa-Pictet-Spengler reaction. *Eur Food Res Technol.* 2009;230(1):111–7.
13. Lucida H. Determination of the ionization constants and the stability of catechin from gambir (*Uncaria gambier* (Hunter) Roxb.). *ASOMPS 12 Int Conf.* 2006;
14. Marlinda. Identifikasi Kadar Katekin Pada Gambir (*Uncaria gambier* Roxb). *J Optim.* 2018;4(1):47–53.
15. Waffo-Tégou P, Hawthorne ME, Cuendet M, Mérillon JM, Kinghorn AD, Pezzuto

- JM, et al. Potential cancer-chemopreventive activities of wine stilbenoids and flavans extracted from grape (*Vitis vinifera*) cell cultures. *Nutr Cancer*. 2001;40(2):173–9.
16. Damianaki A, Bakogeorgou E, Kampa M, Notas G, Hatzoglou A, Panagiotou S, et al. Potent inhibitory action of red wine polyphenols on human breast cancer cells. *J Cell Biochem*. 2000;78(3):429–41.
 17. Li Z, Chen X, Liu G, Li J, Zhang J, Cao Y, et al. Antioxidant activity and mechanism of resveratrol and polydatin isolated from mulberry (*Morus alba* L.). *Molecules*. 2021;26(24):1–18.
 18. Carvajal-zarrabal O, Waliszewski SM, Barradas-dermitz DMA, Orta-flores Z, Hayward-jones PM, Olito CN hip, et al. The Consumption of *Hibiscus sabdariffa* Dried Calyx Ethanolic Extract Reduced Lipid Profile in Rats. *Plants Food Hum Nutr*. 2005;60:153–9.
 19. Mahardika OT, Yuanita L. Efek Metode Pengolahan dan Penyimpanan Terhadap Kadar Senyawa Fenolik dan Aktivitas Antioksidan. *UNESA J Chem*. 2021;10(1):64–78.
 20. Ningsih E, Rahayuningsih S. Extraction, Isolation, Characterisation and Antioxidant Activity Assay of Catechin Gambir (*Uncaria gambir* (Hunter). Roxb. *Al-Kimia*. 2019;7(2).
 21. Irnawati, Purba M, Mujadilah R, Sarmayani. Penetapan Kadar Vitamin C dan Uji Aktifitas Antioksidan Sari Buah Songi (*Dillenia serrata* Thunb). *J Ilm Farm*. 2017;6(2):41.
 22. Warnida H, Masliyana A, Sapri S. Formulasi Ekstrak Etanol Gambir (*Uncaria gambir* Roxb.) Dalam Bedak Anti Jerawat. *J Ilm Manuntung*. 2017;2(1):99–106.
 23. Meena KP, Vijayakumar MR, Priti S. Catechin-loaded Eudragit microparticles for the management of diabetes : formulation , characterization and in vivo evaluation of antidiabetic efficacy. *J Microencapsul*. 2017;0(0):1–9.
 24. Connors A., Amidon G., Stella V. *Chemical Stability of Pharmaceuticals: A Handbook of Pharmacists*. New York: John Wiley and Sons; 1986.
 25. Watson DG. *Analisis Farmasi*. Edisi 2. Kedokteran EGC; 2009.
 26. Qomara WF, Musfiroh I, Wijayanti R. Review : Evaluasi Stabilitas dan Inkompabilitas Sediaan Oral Liquid. *Maj Farmasetika*. 2023;8(3):209–23.
 27. Kurniawan BR. Stabilitas Resep Racikan Yang Berpotensi Mengalami Inkompabilitas Farmasetika Yang Disimpan Pada Wadah Tertutup Baik. *J Ilm Mhs Univ Surabaya*. 2013;2(2):1–16.
 28. Giewicz MJ, Merchel M. A History of The Physical and Chemical Stability of Pharmaceutical : A Review. *Acta Pol Pharm*. 2018;75(2):297–304.
 29. D CG, Bitencourt S, Ayres MV, Lucia A, Freitas P De, Sebastian A, et al. Evaluation of physicochemical and microbiological stability of liquid preparation from tizanidine hydrochloride tablets - a Hospital concern. *Brazilian J Pharm Sci*.

2021;57:1–11.

30. Dao H, Lakhani P, Police A, Kallakunta V, Ajjarapu SS, Wu K wei, et al. Mini-Review Microbial Stability of Pharmaceutical and Cosmetic Products. 2017;
31. Ahmad I, Sheraz MA, Ahmed S. Stability of Drugs and Drug Products. Higher Education Commission-Pakistan; 2016.
32. Welankiwar A, Saudagar S, Kumar J, Barabde A. Photostability Testing of Pharmaceutical Products. *Int Res J Pharm.* 2013;4(9):11–5.
33. Martin A, Bustamante P, Chun AH. *Physical Pharmacy: Physical Chemical Principles in the Pharmaceutical Sciencis.* Philadelphia: Lea and Febiger; 1993. 284–289 p.
34. Lachman L, Lieberman HA, Kanig JL. *The Theory and Practice of Industrial Pharmacy.* Philadelphia: Lea and Febiger; 1994. 1515–1519 p.
35. Swarbick J, Boyland J. *Encyclopedia of Pharmaceutical Technology.* New York: Mercel Dekker Inc.; 1990. 375–384 p.
36. Sayuti NA. Artikel Riset Formulasi dan Uji Stabilitas Fisik Sediaan Gel Ekstrak Daun Ketepeng Cina (*Cassia alata* L .). *J Kefarmasian Indonesia.* 2015;5(2):74–82.
37. Bajaj S, Singla D, Sakhuja N. Stability Testing of Pharmaceutical Products. *J Appl Pharm Sci.* 2012;02(03):129–38.
38. Aashigari S, Goud R, S S, Vykuntam U, Potnuri N. Stability Studies of Pharmaceutical Products. *World J Pharm Res.* 2019;8(1):479–92.
39. Anderson G. Determination of Product Shelf Life and Activation Energy for Five Drugs of Abuse. *Clin Chem.* 1991;37(3):398–402.
40. Gupta PK, Pandit J., Kumar A, Swaroop P, Gupta S. Pharmaceutical Nanotechnology Novel Nanoemulsion - High Energy Emulsification Preparation, Evaluation and Application. *Pharma Res.* 2010;3:117–38.
41. Bhangare D, Rajput N, Jadav T, Sahu AK, Tekade RK, Sengupta P. Systematic strategies for degradation kinetic study of pharmaceuticals: an issue of utmost importance concerning current stability analysis practices. *J Anal Sci Technol.* 2022;13(1).
42. Harmita. Petunjuk Pelaksanaan Validasi dan Cara Penggunaannya. *Maj Ilmu Kefarmasian.* 2004;1(3):117.