

## DAFTAR PUSTAKA

- Abas, F., Lajis, N. H., Shaari, K., Israf, D. A., Stanslas, J., Yusuf, U. K., and Raof, S. M. 2005. A Labdane Diterpene Glucoside from the Rhizomes of Curcuma mangga. *Journal of natural products.* 68(7): 1090-1093.
- Adams, B. K., Ferstl, E. M., Davis, M. C., Herold, M., Kurtkaya, S., Camalier, R. F., Hollingshead, M. G., Sausville, E. A., Rickles, F. R., and Snyder, J. P. 2004. Synthesis and biological evaluation of novel curcumin analogs as anti-cancer and anti-angiogenesis agents. *Bioorganic & medicinal chemistry.* 12(14): 3871-3883.
- Amalraj, A., Pius, A., Gopi, S., and Gopi, S. 2017. Biological activities of curcuminoids, other biomolecules from turmeric and their derivatives—A review. *Journal of traditional and complementary medicine.* 7(2): 205-233.
- Azam, M. G., Noman, M. S., and Al-Amin, M. M. 2014. Phytochemical screening and antipyretic effect of Curcuma zedoaria Rosc.(Zingiberaceae) rhizome. *Journal of Pharmaceutical Research International.* 569-575.
- Brat, P., Tourniaire, F., and Amiot-Carlin, M. J. 2007. 2.3 Stability and Analysis of Phenolic Pigments. *Food colorants: Chemical and functional properties.* 71.
- Dachriyanus. 2004. *Analisis Struktur Senyawa Organik Secara Spektrofotometri.* Andalas University Press. Padang.
- Day, R. A. dan Underwood, A. L. 1999. *Analisis Kimia Kuantitatif Edisi 6.* Penerbit Erlangga. Jakarta.
- Departemen Kesehatan RI. 1979. *Farmakope Indonesia.* Edisi III. Direktorat Jenderal Pengawasan Obat dan Makanan. Jakarta.
- Departemen Kesehatan RI. 2010. *Suplemen I Farmakope Herbal Indonesia.* Departemen Kesehatan RI. Jakarta.
- Dirjen POM. 1986. *Sediaan Galenik.* Edisi II. Departemen Kesehatan RI Bhakti Husada. Jakarta.
- Dirjen POM. 2010. *Acuan Sediaan Herbal.* Vol. 5. Edisi I. Direktorat Obat Asli Indonesia. Badan Pengawas Obat dan Makanan Republik Indonesia. Jakarta.
- Ficker, C. E., Smith, M. L., Susiarti, S., Leaman, D. J., Irawati, C., and Arnason, J. T. 2003. Inhibition of Human Pathogenic Fungi by

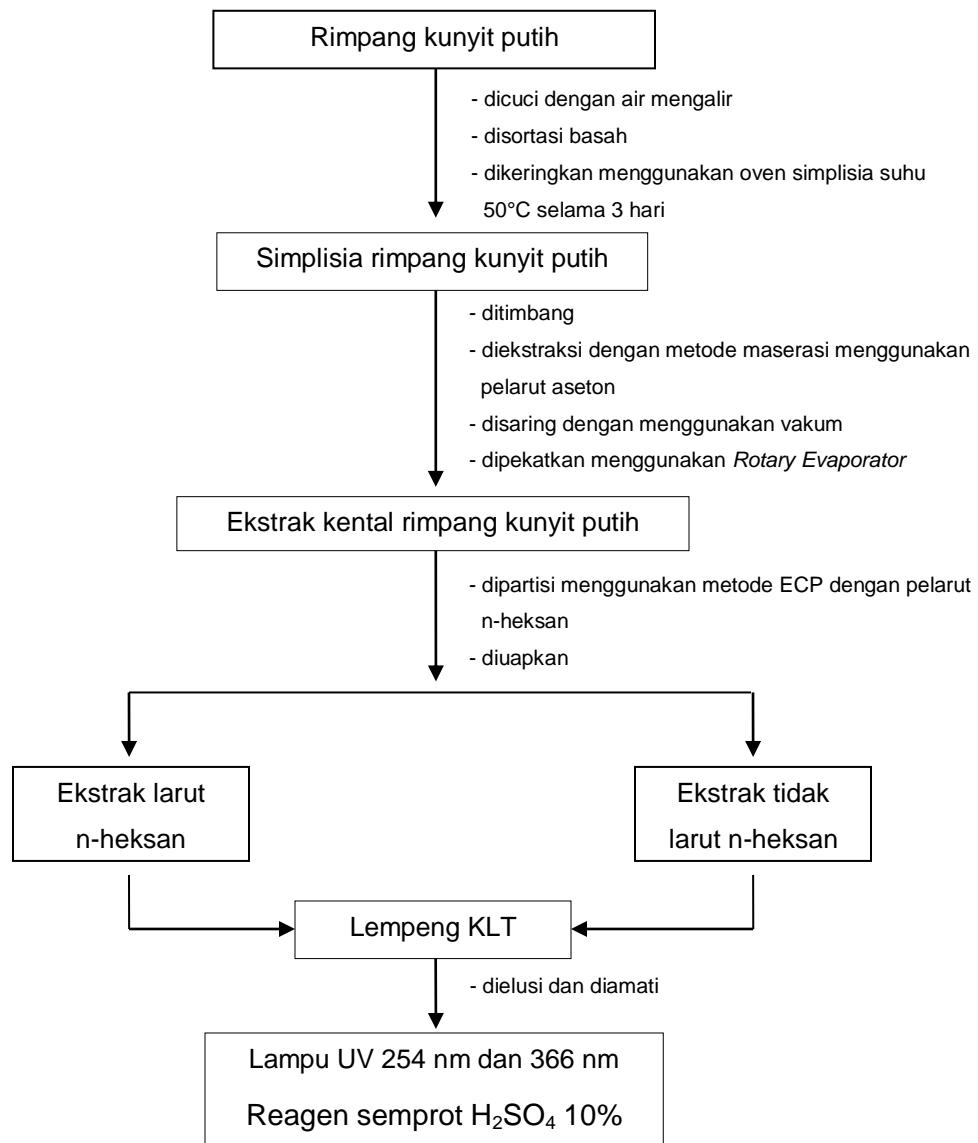
- Members of Zingiberaceae Used by the Kenyah (Indonesian Borneo). *Journal of ethnopharmacology*. 85(2-3): 289-293.
- Gandjar, I. G. dan Rohman, A. 2007. *Kimia Farmasi Analisis*. Pustaka Pelajar. Yogyakarta.
- Gandjar, I. G. dan Rohman, A. 2012. *Analisis Obat Secara Spektrofotometri dan Kromatografi*. Pustaka Pelajar. Yogyakarta.
- Garg, S. N., Naquvi, A. A., Bansal, R. P., Bahl, J. R., and Kumar, S. 2005. Chemical composition of the essential oil from the leaves of Curcuma zedoaria Rosc. of Indian origin. *Journal of Essential Oil Research*. 17(1): 29-31.
- Gasparic, J., and Churacek, J. 1978. *Laboratory handbook of paper and thin-layer chromatography*. E. Horwood.
- Gritter , R.J, Bobbic, J.N., dan Schwarting, A.E. 1991. *Pengantar Kromatografi*, diterjemahkan oleh Kosasih Padmawinata. Edisi II. ITB Press. Bandung.
- Gupta, R. P., Ali, M., Eranna, D., & Setty, R. S. 2003. Evaluation of anti-ulcer effect of root of Curcuma zedoaria in rats. *Indian J Traditional Knowledge*. 2: 375–377.
- Hanani, E. 2014. *Analisis Fitokima*. Penerbit Buku Kedokteran EGC. Jakarta.
- Harmita. 2006. *Analisis Kuantitatif Bahan Baku dan Sediaan Farmasi*. Departemen Farmasi FMIPA Universitas Indonesia. Jakarta.
- Himaja, M., Anand, R., Ramana, M. V., Anand, M., and Karigar, A. 2010. Phytochemical screening and antioxidant activity of rhizome part of Curcuma zedoaria. *International Journal of Research in Ayurveda and Pharmacy*. 1(2): 414-417.
- Hong, C. H., Hur, S. K., Oh, O. J., Kim, S. S., Nam, K. A., and Lee, S. K. 2002. Evaluation of Natural Products on Inhibition of Inducible Cyclooxygenase (COX-2) and Nitric Oxide Synthase (iNOS) in Cultured Mouse Macrophage Cells. *Journal of Ethnopharmacology*. 83(1-2): 153-159.
- Hostettmann, K., Hostettmann, M., and Marston, A. 1995. *Preparative Chromatography Techniques*, diterjemahkan oleh Kosasih Padmawinata. Penerbit ITB. Bandung.
- Lobo, R., Prabhu, K. S., Shirwaikar, A., and Shirwaikar, A. 2009. Curcuma zedoaria Rosc. (White turmeric): A Review of its Chemical,

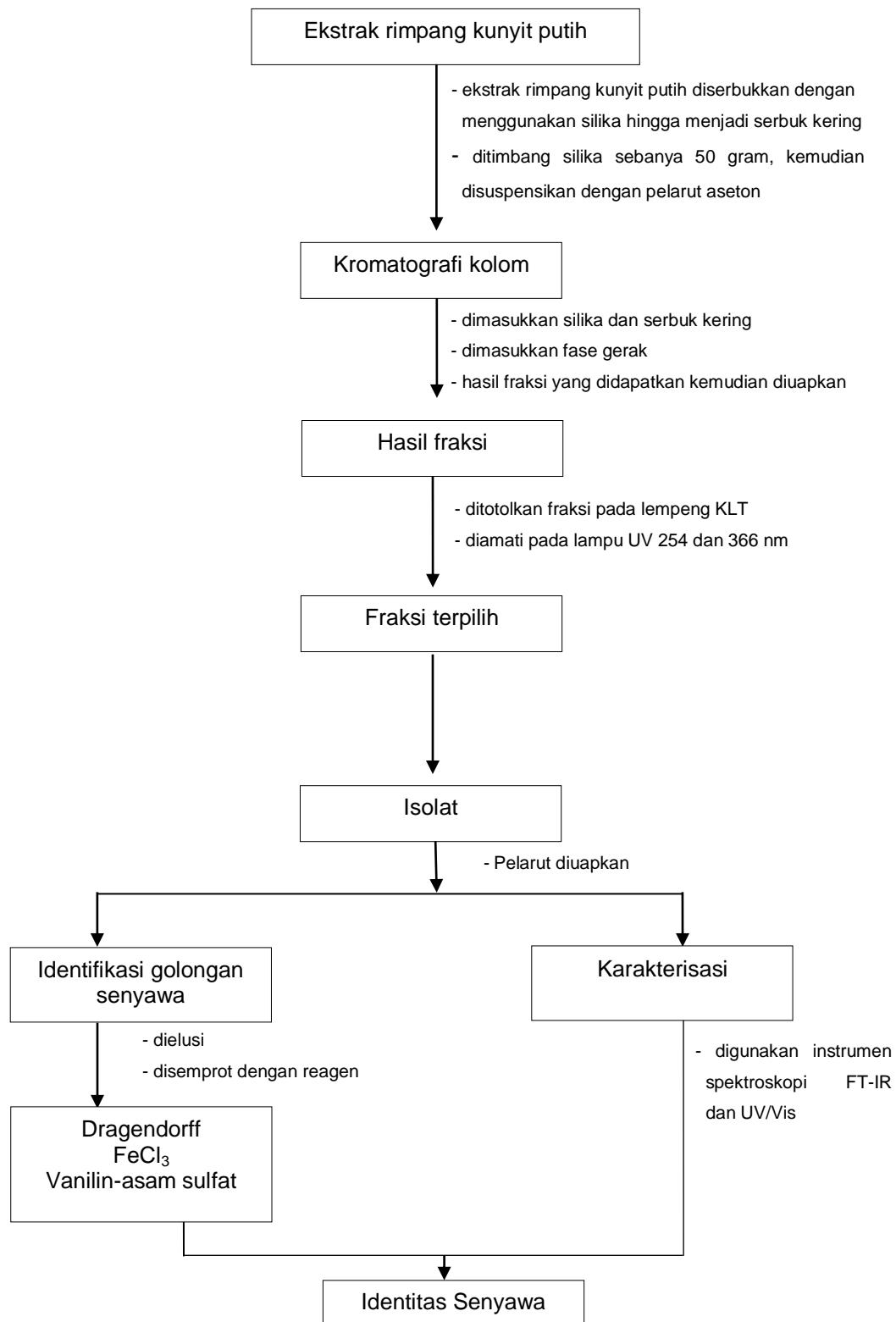
- Pharmacological and Ethnomedicinal Properties. *Journal of Pharmacy and Pharmacology*. 61(1): 13-21.
- Makabe, H., Maru, N., Kuwabara, A., Kamo, T., and Hirota, M. 2006. Anti-inflammatory sesquiterpenes from Curcuma zedoaria. *Natural product research*. 20(7): 680-685.
- Mulja, M., dan Suharman. 1995. *Analisis Instrumental*. Airlangga University Press. Surabaya.
- Navarro, D.F., Souza, M. D., Neto, R. A., Golin, V., Niero, R., Yunes, R. A., and Filho, C. V. 2002. Phytochemical Analysis and Analgesic Properties of Curcuma zedoaria Grown in Brazil. *Phytomedicine*. 9(5): 427-432.
- Pamplona, C. R., de Souza, M. M., da Silva Machado, M., Filhoa, V. C., Navarro, D., Yunes, R. A., and Niero, R. 2006. Seasonal variation and analgesic properties of different parts from Curcuma zedoaria Roscoe (Zingiberaceae) grown in Brazil. *Zeitschrift für Naturforschung C*. 61(1-2): 6-10.
- Patterson, C.A., 2006. *Marker and Natural Health Products*. Wellness East Technology Watch. Canada.
- Raharjo, Tri Joko. 2013. *Kimia Hasil Alam*. Pustaka Pelajar. Yogyakarta.
- Silverstein, R. M., Webster, F. X., and Kiemle, D. J. 2005. *Spectrometric Identification of Organic Compounds*, Seventh Edition. John Wiley & Sons, Ltd. United Stated of America.
- Singh, G., Singh, O. P., and Maurya, S. 2002. Chemical and biocidal investigations on essential oils of some Indian Curcuma species. *Progress in Crystal Growth and Characterization of Materials*. 45(1-2): 75-81.
- Singh, P., Singh, S., Kapoor, I. P. S., Singh, G., Isidorov, V., and Szczepaniak, L. 2013. Chemical composition and antioxidant activities of essential oil and oleoresins from Curcuma zedoaria rhizomes, part-74. *Food Bioscience*. 3: 42-48.
- Skoog, D. A., Holler, F. J., and Nieman, T. A. 1998. *Principles of Instrumental Analysis*. Fifth ed. Harcourt Brace. Philadelphia.
- Stahl, E. 1985. *Drug Analysis by Chromatography and Microscopy : a Practical Supplement to Pharmacopoeias*, diterjemahkan oleh Kokasih Padmawinata dan Iwang Soediro. Institut Teknologi Bandung. Bandung.

- Stuart, B. H. 2004. *Infrared Spectroscopy: Fundamentals and Applications*. John Wiley & Sons, Ltd. West Sussex.
- Syu, W. J., Shen, C. C., Don, M. J., Ou, J. C., Lee, G. H., and Sun, C. M. 1998. Cytotoxicity of Curcuminoids and Some Novel Compounds from Curcuma zedoaria. *Journal of Natural Products*. 61(12): 1531-1534.
- Thermo, Nicolet. 2001. *Introduction to FTIR Spectrometry*. Thermo Nicolet Inc. Madison. USA.
- Tjay, T. H dan Rahardja, K. 2007. *Obat-Obat Penting Khasiat Penggunaan dan Efek-Efek Sampingnya*. PT. Eex Media Komputindo. Jakarta.
- Skoog, D.A. and West, D.M. 1971. *Principles of instrumental analysis*. Holt. Rinehart and Winston, Inc. New York.
- Windono, T., & Parfati, N. 2002. Curcuma Zedoaria (Bergius) Roscoe Kajian Pustaka Kandungan Kimia dan Aktivitas Farmakologik. Artocarpus: *Media Pharmaceutica Indonesiana*. 2(1): 247-257.
- Yonzon, M., Lee, D. J., Yokochi, T., Kawano, Y., and Nakahara, T. 2005. Antimicrobial activities of essential oils of Nepal. *Journal of Essential Oil Research*. 17(1): 107-111.

## LAMPIRAN

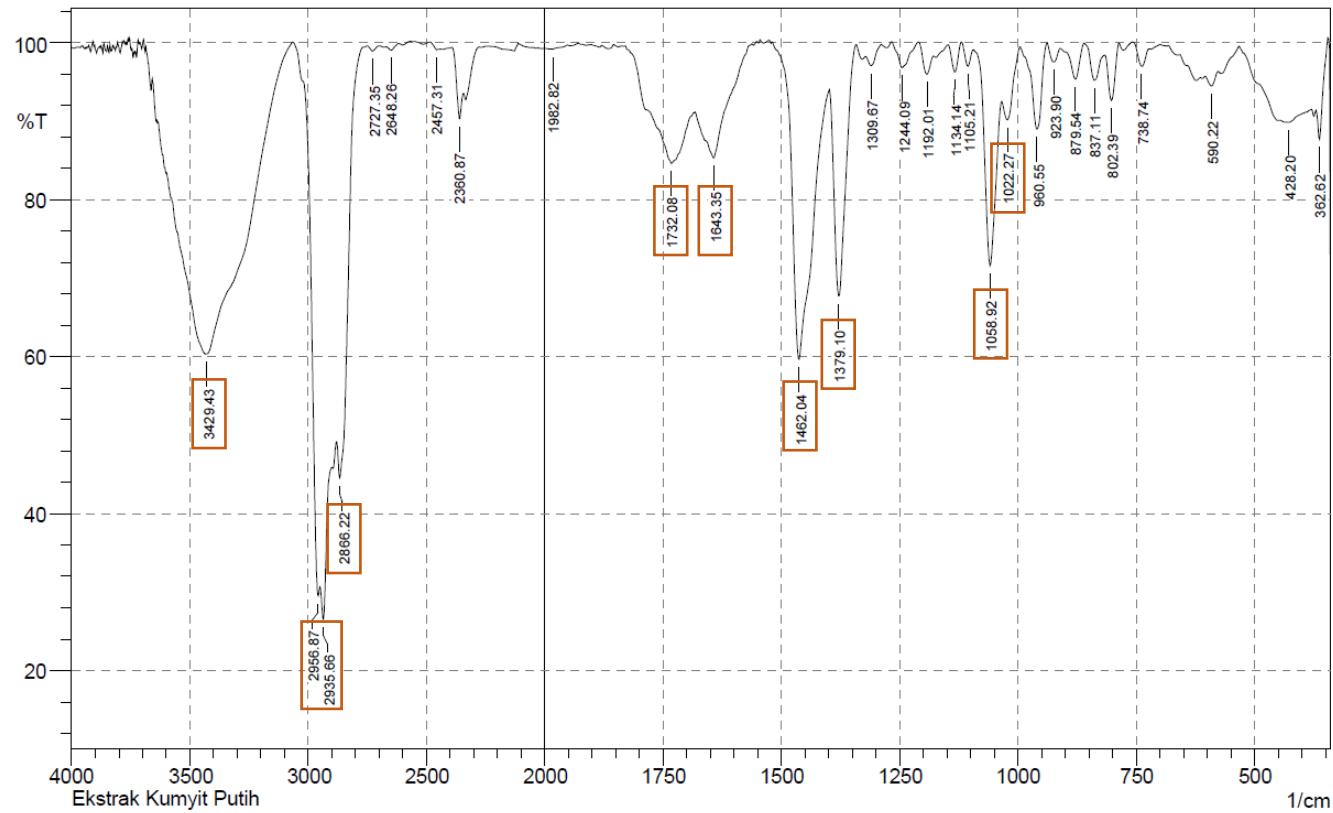
### Lampiran 1. Skema kerja penelitian

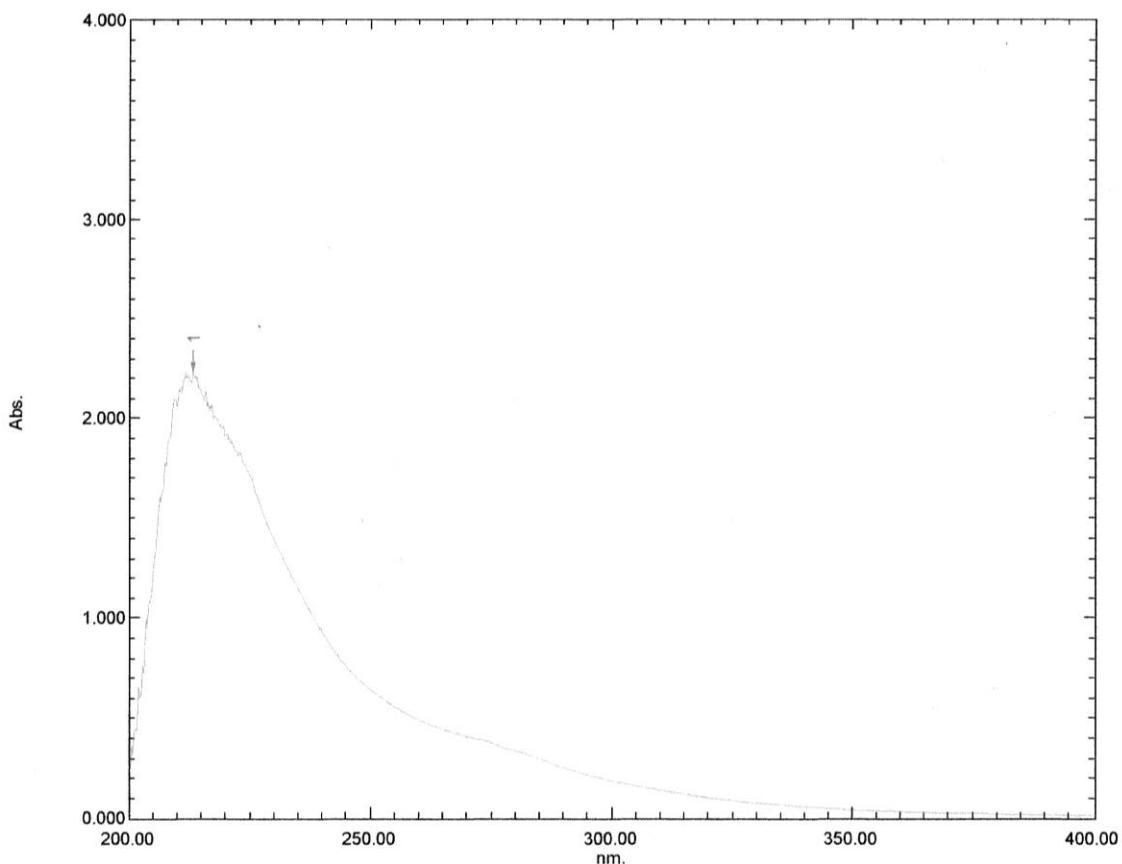




## Lampiran 2. Data analisis spektroskopi FT-IR

 SHIMADZU



**Lampiran 3. Data Analisis Spektroskopi UV/Vis**

No.	P/V	Wavelength	Abs.	Description
1	●	213.20	2.237	

#### Lampiran 4. Dokumentasi Penelitian



Gambar 13. Rimpang kunyit putih  
(*Curcuma zedoaria*)



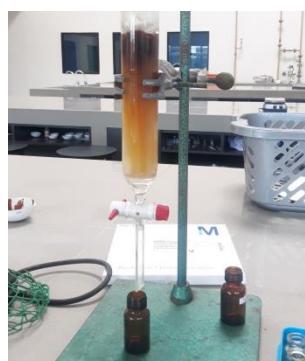
Gambar 14. Simplesia C. zedoaria



Gambar 15. Proses maserasi



Gambar 16. Proses penyaringan



Gambar 17. Proses kromatografi kolom



Gambar 18. Proses purifikasi dengan  
metode kromatografi kolom