

BAB 5 SIMPULAN

5.1. Simpulan

- Konsentrasi kombinasi *locust bean gum* – *xanthan gum* dan konsentrasi PVP K-30 serta interaksinya memiliki pengaruh terhadap jumlah ibuprofen yang larut dari tablet lepas lambat. Konsentrasi kombinasi *locust bean gum* – *xanthan gum* dan konsentrasi PVP K-30 menghambat larutnya ibuprofen dari tablet. Interaksi antara kombinasi *locust bean gum* – *xanthan gum* dan PVP K-30 meningkatkan melarutnya obat dari tablet.
- Formula optimum dari tablet lepas lambat ibuprofen diperoleh dengan menggunakan konsentrasi kombinasi *locust bean gum* – *xanthan gum* sebesar 7,58% dan konsentrasi PVP K-30 sebesar 3,09% yang akan menghasilkan tablet dengan persen obat terlarut dalam 3 jam sebesar 49,31% dan persen obat terlarut dalam 6 jam sebesar 51,76%.

5.2. Alur Penelitian Selanjutnya

Dilakukan penelitian pembuktian beberapa formula optimum terpilih, yang kemudian dibandingkan dengan hasil secara teoritis

DAFTAR PUSTAKA

Aiache, J.Ph., J.Ph. Devissaguet, dan A.M. Guyot-Hermann, 1982, **Biofarmasi**. edisi 2, terjemahan W. Soeratri, Universitas Airlangga, Surabaya, 328-364.

Anonim, 1979, **Farmakope Indonesia**, Ed. III. Departemen Kesehatan RI, Jakarta, 6-8, 510, 591, 990.

Anonim, 1995, **Farmakope Indonesia**, Ed. IV. Departemen Kesehatan RI, Jakarta, 4, 166, 449-450, 488-489, 515, 783-784, 999-1000.

Anonim, 1997, **AHFS**, Drug Information AMERICAN Society of Health System Pharmacist, Inc., Bethesda, 1499-1504.

Anonim, 2005, **US Pharmacopeia XXVIII**, US Pharmacopeial Convention, Inc., Rockville, 1896-1899, 2412-2415.

Ansel, H. C., 1989, **Introduction to Pharmaceutical Dosage Form**, 4th edition, Lea & Febiger, Philadelphia, 259-272.

Ashton, P., J. Hadgraft, K. R. Brain, T. A. Miller, and K. A. Walter, 1988, Surfactant Effect in Topical Drug Availability. **Int. J.Pharm.**, 41, 189-195.

Banakar, U.V., 1992, **Pharmaceutical Disolution Testing**, Marcel Dekker, Inc., New York, 322.

Banker, G.S. dan N. R. Anderson, 1994, Tablet, dalam: **Teori dan Praktek Farmasi Industri**. L. Lachman, H. A. Lieberman, J. L. Kanig (Eds.), edisi 3 terjemahan Suyatmi S., Universitas Indonesia, Jakarta, 643-731.

Bolton, S., 1990, **Pharmaceutical Statistic: Practical and Clinical Applications**, 2nd edition, Marcel Dekker, Inc., New York, 324-427.

Clarke's Isolation and Identification of Drugs 2nd Edition, 1986, The Pharmaceutical Press, London, 567-568.

Collet, J. and C. Moreton, 2002, Modified-release peroral dosage form. **Pharmaceutical The Science of Dosage form design**, 2nd edition, De Montfort University, Leicester, 299-302.

Colombo, P., P. Santi, P. Bettini, C. S. Brazel, and N. A. Peppas, 2000, Drug release from swelling-controlled systems, In: D. L. Wise (Ed.), **Handbook of Pharmaceutical Controlled Release Technology**, Marcel Dekker, Inc., New York, 185-190.

Fierse, E. F. and A. T. Hagen, 1986, Pre formulation. In : **The Theory and Practice of Industrial Pharmacy**, L. Lachman, H. A. Lieberman, J. L. Kanig (Eds.), 3rd ed., Lea and Febiger, Philadelphia, 183-184.

Gennaro, A. R., 1990, **Remington's Pharmaceutical Sciences**, 18th ed., Mack Publishing Company, Easton, 1307

Green, J.M., 1996, A Practical Guide to Analytical Method Validation. **Analytical Chemistry**, 23, 305-309.

Hadisoewignyo, L., 2005, **Studi Pelepasan In Vitro Ibuprofen dari Sistem Matriks Kombinasi Xanthan gum – Locust bean gum dan Xanthan gum – Kalium sulfat Dalam Bentuk Tablet**, Tesis , Universitas Gadjah Mada, Yogyakarta, 27-33.

Higuchi, W.L., 1963, Mechanism of Sustained Action Medication. Theoretical Analysis of Release of Solid Drug Disperse in Solid Matrices, **Journal of Pharmaceutical Sciences**, vol. 52, 1145-1149.

Kang, K. S. and D. J. Pettitt, 1993, Xanthan Gum. In: **Industrial Gums : Polysaccharides and Their Derivativer**, R. L. Whistler, J. N. Bemiller (Eds.), 3rd ed., Academic Press, Inc., Sand Diego, 341-371.

Khan, K.A., 1975, The Concept of Dissolution Efficiency. **J. Pharm**, 27, 48-49.

Kibbe, A.H. , 2000, **Handbook of Pharmaceutical Excipients**, 3rd Ed. The Pharmaceutical Press, London, 73-76, 276-284, 305-307, 433-439, 555, 556

Kimihiko, T., 1984, The Application of Avicel Microcrystalline Cellulose and Acdisol Internally Crosslinked CMC-Na to The Pharmaceutical Product, Asahi Chemical Industry Co, Ltd, Japan, on **Avicel and Ac – Di – Sol Seminar**, Jakarta, 1-7, 13.

Langenbucher, F., 1972, Linearization of Dissolution Rate Curve by Weibull Distribution. **J. Pharm. Sci.**, 57, 1292-1301.

Lapidus, H. and N. G. Lordi, 1968, Drug Release From Compressed Hydrophilic Matrices **J. Pharm. Sci.**, 57, 1292-1301.

Lowman, A. M. and N. A. Peppas, 1999, Hydrogels. In: **Encyclopedia of Controlled Drug Delivery**, E. Mathiowitz (Ed.), volume 1, John Wiley & Sons, Inc., Canada, 405-406.

Lund, W., 1994, **The Pharmaceutical Codex Principles & Practices of Pharmaceutic**, 12th ed., The Pharmaceutical Press, London, 908

Maier, H., M. Anderson, C. Karl, and K. Majauson, 1993, Guar, locust bean, tara and fenugreek gums In: **Industrial Gums: Polysaccharides and Their Derivaties** R. L. Whistler, J. N. Bemiller (Eds.) , 3rd ed., Academic Press, Inc., San Diego, 145-175.

Martin, A. and J. Swarbrick, 1983, **Physical Pharmacy**, 3rd ed., Lea and Febiger, Philadelphia, 845- 847.

Park, K., W. S. W. Shalaby, and H. Park, 1993, **Biodegradable Hydrogels for Drug Delivery**, Technomic Publishing co., Inc., Lancaster, 99-114.

Parrot, E.L., 1971, **Pharmaceutical Technology Fundamental Parmaceutics**, 3rd edition. Burgess Publishing Company, Minneapolis, 17-19, 82.

Reynolds, J.E.F., 1982, **Martindale: The Extra Pharmacopoeia**, 28th ed. The Pharmaceutical Press, London, 349.

Shargel, L. and A. B. C. Yu, 1999, **Applied Biopharmaceutics and Pharmacokinetics**, 4th ed. McGraw – Hill. New York, 8, 132, 169-200.

Siregar, C. J. P., 1992, **Proses Validasi Manufaktur Sediaan Tablet**, Institut Teknologi Bandung, Bandung, 29-31.

Venkataraju, M. P., D. V. Gowda, K. S. Rajesh, and H. G. Shivakumar, 2007, Xanthan and Locust Bean Gum (from *Ceratonia siliqua*) Matrix Tablets For Oral Controlled Delivery of Propranolol Hydrochloride, **Asian Journal of Pharmaceutical Sciences.**, 2(6), 239-248.

Voigt, R., 1995, **Buku Pelajaran Teknologi Farmasi**. Terjemahan S. Noerono dan M. S. Reksohardiprojo, Gadjah Mada University Press, Yogyakarta, 163-210.

Wagner, J.G., 1971, **Biopharmaceutics and Relevant Pharmacokinetics**, 1st edition. Drug Intelligence Publications, Illinois, 64-110.

Wells, J.T., 1988, **Pharmaceutical Pre formulation: The Physiochemical Properties of Drugs Substances**, Ellis Howard, Chester, 209-211.

Widiawati, L., 1998, **Pengaruh Konsentrasi PVP K-30 Sebagai Bahan Pengikat Terhadap Sifat Fisik Tablet Parasetamol**, skripsi, Universitas Katolik Widya Mandala Surabaya.

Wilmana, P. F., 1995, Analgesik – Antipiretik Analgesik Anti-Inflamasi Nonsteroid dan Obat Pirai, dalam: **Farmakologi dan Terapi**, Sulistia G. Ganiswarna (Ed.), edisi 4, Gaya Baru, Jakarta, 207-218.