BAB 5
SIMPULAN

5.1. Simpulan

Dari data penelitian yang telah diinterpretasikan, dapat ditarik kesimpulan :

1. Dari hasil uji *floating lag time* menunjukkan konsentrasi matriks HPMC mempengaruhi waktu mengapungnya sediaan.
2. Dari profil disolusi menunjukkan jumlah matriks HPMC menghambat pelepasan obat.

5.2. Alur Penelitian Selanjutnya

Dapat dilakukan penelitian lebih lanjut, meliputi:

1. Penelitian lebih lanjut terhadap pelepasan obat tablet ranitidin HCl dengan penambahan konsentrasi matriks HPMC.
2. Penelitian optimasi terhadap beberapa komposisi matriks HPMC yang berbeda dengan bahan obat yang sama.
3. Penelitian terhadap parameter farmakokinetika sediaan *effervescent* lepas lambat ranitidin HCl secara *in vivo* dan dicari korelasi antara *in vivo* dan *in vitro*nya.

DAFTAR PUSTAKA

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, 2003, **Gastroretentive Drugs** ; A Review, 1-3 http : / /www.expresspharmapulse.com (diakses 15 Sepetember 20005).

Ansel, H. C., 1989. **Pengantar Bentuk Sediaan Farmasi**, terjemahan F. Ibrahim, 4th ed., UI Press, Jakarta, 247 – 299.

Banakar, U. V., 1992. **Pharmaceutical Dissolution Testing**, Marcel Dekker, Inc., New York, 19 – 26, 322 – 330.

Banker, G. S. and Anderson, N, R., 1994. Tablets.: Lachman, L., Lieberman, H.A., Kanig, J.L (Eds), **The Theory And Practice of Industrial Pharmacy**, 3rd ed., Lea and Fabiger, Philadelpia, 293 – 317.

Chang, R. K. & Robinson, J.R., 1989. Sustained drug release from tablets and particle through coating. In: **Pharmaceutical Dosage Forms: Tablet**, Vol. 1, 2nd Ed., Marcel Dekker, Inc. New York, 205 – 208.

Chawla, G., Gupta, P., Koradadia, V., Bansal, A. K., 2003, Gastroretention: A Means to Address Regional Variability in Intenstinal Drugs Absorption, in:**Pharmaceutical Technology**, 50-60.

Collet. A., 1999. **Modulation of the Permeability of H_2 Receptor Antagonists Cimetidine and Ranitidin HCl by P-Glycoprotein in Rat Intestine and the Human Colonic Cell Line Caco-2**, Department of Medicine, University of Manchester School of Medicine, Hope Hospital, Salford, England (A.C., N.B.H., E.S., G.W.); and [2]School of Pharmacy and Pharmaceutical Sciences, University of Manchester, Manchester, England (M.R.).

Collet, J. and Moreton, C., 2002. Modified-release perolal dosage form. In: Aulton, M.E (Ed.), Pharmaceutics: **The Science of Dosage Form Design**, 2nd ed., Churchill Livingstone, Edinburgh, 289 – 302.

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

Dave, B.S., Amin, A.F., Pattel, M.M., 2004, Gastroretentive Drug Delivery System of Ranitidine Hydrochloride: Formulation and In Vitro Evaluation, **AAPS PharmSciTech**, 5(2), 5.

Garg, D. C, 1985, **Pharmacokinetics of Ranitidin HCl Following Oral Administration with Ascending Dose and with Multiple Fixed Dose**, Department of Medicine, University of Manchester School of Medicine, Hope Hospital, Salford, England (A.C., N.B.H., E.S., G.W.); and [2]School of Pharmacy and Pharmaceutical Sciences, University of Manchester, Manchester, England (M.R.).

Gennaro, A. R, 2000, **Remington: The Science and Practice of Pharmacy**, 20th ed, Vol. II, Mack Publishing Company, Pensylvania, 1016.

Gohel, M. C., Mehta, P. R., Dave, R. K., Bariya, N. H., 2004, A More Relevant Dissolution Method For Evaluation of Floating Drug Delivery System, **Dissolution Technologies**, Vol. 11, Issue 4, 22-26.

Gordon, R.E., Rosanske, T.W., Fonner, D.E., Anderson, N.R., Banker, G.S., 1990. **Granulation Technology and Tablet Characterization**. In: Lieberman, H.A., Lachman, L., Schwartz, J.B. (Eds.), **Pharmaceutical Dosage Forms: Tablet**, volume 2,2nd ed., Marcel Dekker, Inc., New York, 283 – 300, 321 – 336.

Green, J.H., 1996. A Practical Guide to Analytical method Validation. **Analytical Chemistry**, volume 23, Mei, 305 – 309.

Kumar, P., Singh, S., Mishra, B., 2007. **Gastroretentive drug delivery system of Ranitidin Hydrochloride Based on Osmotic Technology: development and evaluation**, Department of Pharmaceutics, Institute of Technology Banaras, Hindu University Varanasi-221005 (U.P.), India.

Lapidus, H. and Lordi, N.G., 1968. **Drug release from Compressed Hydrophilic Matrices**, *J Pharm Sci*., 57, 1292 – 1301.

Lieberman, H.A., Lachman, L., Schwartz, J.B., 1989. **Tablet Formulation and Design, Pharmaceutical Dosage Forms: Tablet**: Vol. 7.2nd Edition. Marcel Dekker, New York, 258 – 326.

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

Moes, A.J., 2003, **Gastric Retention System for Oral Drugs Delivery System**, Business Briefing Pharmatech, 157-159.

Parrot, E.L., 1971, Pharmaceutical Technology : **Fundamental Pharmaceutics**, Burgess Publishing Company, Minneapolis, 17 – 31, 80 – 86.

Petunjuk Operasional Penerapan Cara Pembuatan Obat yang Baik, 2001. Badan Pengawas Obat dan Makanan. Jakarta, 412-429.

Perez, G. G., Perez, A. G., Lopez, A. T., Olguin, H. J., Perez, C. F., Perez, J. F., Portugal, M. C., Asseff, I. L., And Vieyra, A. C., 2005. Effect of Age on the Pharmacokinetics of Ranitidine in Healthy Mexican Volunteers. **Proc. West. Pharmacol. Soc.**, 48(84-88), 84-88.

Rocca, J.G., Omidin, H., Shah, K., 2003, **Progresses In Gastro Drugs Delivery System**, Business Briefing Pharmatech, 152.

Rohith,G., 2008. **Floating Drug Delivery of a Locally Acting H2-antagonist : An Approach Using An In Situ Gelling Liquid Formulation**, Department or Pharmaceutics, National College of Pharmacy, Shimoga-577201, India.

Rowe, R.C., Sheskey, J.P., Weller, J.P., 2003. **Handbook of Pharmaceutical Excipients**, 4th ed., The Pharmaceutical Press and American Pharmaceutical Association, London, 78, 280, 297-300, 392, 519.

Saiffulah, S., Syukri, Y., Utami, R., 2007. **Profil Pelepasan Propanolol HCl dari Tablet Lepas Lambat dengan Sistem *Floating* Menggunakan matriks Methocel K15M**, Jurnal Ilmiah Farmasi, Jurusan Farmasi, Universitas Gajah Mada, Yokyakarta.

Shargel, L. and Yu, B.C., 1988. **Biofarmasetika dan Farmakokinetika Terapan**. (Sjamsiah, S., penerjemah). Airlangga University Press, Surabaya, 445 – 456.

Siregar, Ch.J.P., 1992. **Proses Validasi dan Manufaktur Sediaan Tablet**. In: Asyarie, S., Mar'u, U., Badruzzaman, S.(Eds.), Prosiding Seminar Validasi di Industri Farmasi, Jurusan Farmasi FMIPA, Institut Teknologi Bandung, 26 – 41.

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

Voigt, R., 1995. **Buku Pelajaran Teknologi Farmasi**, terjemahan S.M. Soewandhi, 5th ed., Gajah Mada University Press, Yogyakarta, 165 – 173.

Wagner, J,G., 1971. **Biopharmaceutics and Relevant Pharmacokinetic**, Drug Intelligence Publications, Illinois, 64 – 110.

Winek, C. L., Wahba, W. W., Winek jr, C. L., Balzer, B. S., 2001. **Drug and Chemical Blood-Level Data**. Fisher Health Care, Pittsburgh, 1-17.