



REFERENCES

1. Longer M.A., and J.R. Robinson, Remington's Pharmaceutical sciences (Gennaro A.R. ed.), pp. 1644-1661, Mack Publication Company, Pennsylvania, 17th ed., 1985.
2. Ballard B.E., Sustained and Controlled Release Drug Delivery Systems (Robinson J.R. ed.), Drugs and the Pharmaceutical Sciences, Vol. 6, P.S., Marcel Dekker, Inc., New York, 1978.
3. Flower R.J., F. Moncada, and J.R. Vane, Goodman and Gilman's The Pharmacological Basis of Therapeutics (Gilman A.G. ed.), pp. 695-697, McMillan Publication Company, New York, 17th ed., 1985.
4. Reynolds, J.E.F. (ed.), The Extra Pharmacopeia, p. 257, The Pharmaceutical Press, London, 28th ed., 1982.
5. Pongpaibul, Y., J.C. Price, and C.W. Whitworth, "Preparation and Evaluation of Controlled Release Indomethacin Microspheres," Drug Dev. Ind. Pharm., 10(10), 1597-1616, 1984.
6. Brune-K, "Clinical Relevance of NSAIDs Pharmacokinetics." Eur. J. Rheumatol. Inflamm., 9(1), 18-23, 1987.
7. Sa B., Suranjana R., and Sudip K.D., "Preparation and Vitro Evaluation of Controlled Release Dosage Form of Indomethacin," Drug Dev. Ind. Pharm., 13(7), 1267-1278, 1987.

8. Pillai J.C., A. Babar, and F.M. Plakogiannis, "Polymers in Cosmetic and Pharmaceutical Industries," Pharm. Acta Helv., 63(2), 46-53, 1988.
9. Drug Information TM 87 (McEvoy G.K. ed.), pp. 920-931, American Society of Hospital Pharmacist, Inc., Bethesda, MD, 1987.
10. Mcnamara D., Chemical Stability of Pharmaceuticals, (Connors K. A., G.L. Amidon, and V.J. Stella eds.), pp. 509-516, John Wiley & Sons, Inc., New York, 1986.
11. Brien M.O., J. McCauley, and E. Cohen, Analytical Profiles of Drug Substances (Florey K. ed.), Vol. 13, pp. 221-237, Academic Press, New York, 1984.
12. Drug Facts and Comparisons (Olin B.R. ed.), p. 908, J.B. Lippincott Company, St. Louis, Missouri, 1987 ed., 1987.
13. Swinyard E.A., Remington's Pharmaceutical Sciences (Gennaro A. R. ed.), p. 1118, Mack Publication Company, Pennsylvania, 17th ed., 1985.
14. Thailand Index of Medical Specialities (Oo J. ed.), 17(2), pp. 133-134, 142, TIMS, Singapore, 1987.
15. Suryakusuma H., and H.W. Jun, "Encapsulated hydrophillic polymer beads containing indomethacin as controlled release drug delivery systems," J. Pharm. Pharmacol. 36, 497-501, 1984.
16. Hou W.M., S. Miyazaki, M. Takada, and T. Komai, "Sustained Release of Indomethacin from Chitosan Granules," Chem. Pharm. Bull., 33(9) 3986-3992, 1985.

17. Shaikh N.A., S.E. Abidi, and L.H. Block, "Evaluation of Ethylcellulose as a Matrix for Prolonged Release Formulations. II. Sparingly Water-soluble Drugs : Ibuprofen and Indomethacin," Drug Dev. Ind. Pharm., 13 (14), 2495-2518, 1987.
18. Sarisuta N., and J. Sirithunyalug, "Release Rate of Indomethacin from Coated Granules," ibid., 14(5), 683-687, 1988.
19. Nakajima T., Y. Takashima, K. Iida, H. Mitsuta, and M. Koishi, "Preparation and in Vitro Evaluation of Sustained-Release Suppositories Containing Microcapsulated Indomethacin," Chem. Pharm. Bull., 35(3), 1201-1206, 1987.
20. Lai J., C. Chiang, and T. Wu, "Release Kinetics of Indomethacin from Polymeric Matrices," Drug Dev. Ind. Pharm., 13(8), 1399-1408, 1987.
21. Ford J.L., M.H. Rubinstein, F. McCaul, J.E. Hogan, and P.J. Edgar, "Importance of Drug Type, Tablet Shape and Added Diluents on Drug Release Kinetics from HPMC Matrix Tablets," Int. J. Pharm., 40, 223-234, 1987.
22. Folco G., C. Borghi, and F. Berti, "Non-steroidal Anti-inflammatory Drug Therapy : Advantages and Disadvantages of Long Half-life Drugs vs. Slow-release Formulations." Int. J. Cli. Pharmacol. Res., 6(6), 475-480, 1986.
23. Moskowitz RW., "Sustained Release Indomethacin in the Comprehensive Management of Osteoarthritis." Am. J. Med., 79(4c), 39-51, 1985.

24. Calabro J.J., "Sustained Release Indomethacin in the Management of the Acute Painful Shoulder from Bursitis and/or Tendinitis," ibid., 79(4c), 32-38, 1985.
25. Calabro J.J., "Sustained Release Indomethacin in the Management of Ankylosing Spondylitis," ibid., 79(4c), 39-51, 1985.
26. Kaarela K., K. Lehtinen, P. Makisara, K. Holttinen, U. Lamminsivu, and A. Gardin, "Pharmacokinetics and Tolerance of Slow-release Indomethacin Tablets in Rheumatoid Arthritis." Eur. J. Clin. Pharmacol., 23(4), 349-351, 1982.
27. Reinberg A., F. Levi, "Clinical Chronopharmacology with Special Reference to NSAIDs," Scand. J. Rheumatol. [Suppl], 65, 118-122, 1987.
28. The United States Pharmacopeia, pp. 532-533, The United States Pharmacopeial Convention, Inc., Rockville, Md., 21st rev., 1985.
29. Curran N.M., E.G. Lovering, K.M. McErlane, and J.R. Watsan, "Impurities in Drugs IV : Indomethacin," J. Pharm. Sci., 69(2), 187-189, 1980.
30. Plazonnet B., and W.J.A. Vanderhenvel, "Preparation, Gas Chromatography and Mass Spectrometry of Methyl and Trimethylsilyl Esters of Indomethacin," J. Chromatog., 142, 587-596, 1977.
31. Hvidberg E., H.H. Lausen, and J.A. Jansen, Eur. J. Clin. Pharmacol., 4, 119, 1974.

32. Designed Products Department of The Dow Chemical Company.
"Methocel and Cellulose Ethers." The Dow Chemical
Company, Michigan, U.S.A., 1978.
33. Handbook of Pharmaceutical Excipients, American Pharmaceutical
Association, Washington, 1986.
34. Lapidus H., and N.G. Lordi, "Drug Release from Compressed
Hydrophilic Matrices, " J. Pharm. Sci., 57(8),
1292-1301, 1968.
35. Rao K.V.R., K.P. Devi, and P. Buri, "Cellulose Matrices for
Zero-order Release of Soluble Drugs," Drug Dev. Ind.
Pharm., 14(15-17), 2299-2320, 1988.
36. Lapidus H., and N.G. Lordi, "Drug Release from Compressed
Hydrophilic Matrices," J.Pharm.Sci., 55(8), 840-843
(1966).
37. Ford J.L., M.H. Rubinstein and J.E. Hogan, "Dissolution of a
Poorly Water Soluble Drug, Indomethacin, from HPMC
Controlled Release Tablets," J.Pharm.Pharmacol., 37
(Supp.), 33p, 1985.
38. Baveja S.K., and K.V.R. Rao, "Sustained Release Tablet
Formulation of Centperazine," Int. J. Pharm., 31,
169-174, 1986.
39. Ford J.L., M.H. Rubinstein, and J.E. Hogan, "Formulation of
Sustained Release Promethazine Hydrochloride Tablets
Using HPMC Matrices," ibid., 24, 327-338, 1985.

40. Ford J.L., M.H. Rubinstein, and J.E. Hogan, "Propranolol Hydrochloride and Aminophylline Release from Matrix Tablets Containing HPMCP," ibid., 24, 339-350, 1985.
41. Shangraw R.F., "Design and Formulation of Sustained Release Theophylline Dosage Forms," Drug Dev. Ind. Pharm., 14(2 & 3), 319-335, 1988.
42. Shaikh N.A., S.E. Abidi and C.H. Block, "Evaluation of Ethyl cellulose as a Matrix for Prolonged Release Formulations. I. Water Soluble Drugs : Acetaminophen and Theophylline," ibid., 13(8), 1345-1369, 1987.
43. Stamm A., and J.C. Tritsch, "Some Considerations on the Liberation of Drugs from Inert Matrices," ibid., 12 (11-13), 2337-2353, 1986.
44. Prakash., K.O. Choon and A.R. Wolfgang, "Release of Theophylline from Ethylcellulose Microcapsules alone or in Conjunction with Fat Embedded (Precirol[®]) Granules and Hydroxypropylmethylcellulose," ibid., 13(3), 449-472, 1987.
45. Kohri N., K. Miyazaki, T. Arita, H. Shimono, A. Nomura, and H. Yasuda, "Release Characteristics of Nifedipine Sustained Release Granules in Vitro and in Healthy Subjects," Chem. Pharm. Bull., 35(6), 2504-2509, 1987.
46. Singh J., and D.H. Robinson, "Controlled Release Kinetics of Captopril from Tableted Microcapsules," Drug Dev. Ind. Pharm., 14(4), 545-560, 1988.

47. Desai S.J., A.P. Simonelli, and W.I. Higuchi, "Investigation of Factors Influencing Release of Solid Drug Dispersed in Inert Matrices," J. Pharm. Sci., 54(10), 1459-1464, 1965.
48. Higuchi T., "Mechanism of Sustained-Action Medication," ibid., 52(12), 1145-1149, 1963.
49. Carstensen, J.T., "Theories of Dissolution Single Particulate Systems." in Dissolution Technology (Luson, L.J., and Carstensen, J.T., eds) pp. 3-4 I.P.T. Academy of Pharmaceutical Science, Washington D.C., 1974.
50. Carstensen, J.T., (ed) Pharmaceutical of Solid Dosage Form, pp. 63-66, John Wiley & Sons, New York, 1977.
51. Battista O.A. Fundamentals of High Polymers, p. 4, Reinhold Publishing Corporation, NY, 1958.
52. Krassing H., "Structure of Cellulose and its Relation to Properties of Cellulose Fibers," Cellulose and its Derivatives Chemistry, Biochemistry and Application (Kennedy J.F., G.O. Phillips, D.J. Wedlock, and P.A. Williams, lds.), p. 27, Ellis Horwood Limited, 1985.
53. Lewin M., "New Chemical Approaches to the Structure of Cellulose." Cellulose and its Derivatives Chemistry, Biochemistry and Application (Kennedy J.F., G.O. Phillips, D.J. Wedlock, and P.A. Williams, lds.), p. 27, Ellis Horwood Limited, 1985.
54. Honeyman J. (ed.), Recent Advances in the Chemistry of Cellulose and Starch, p. 149, Interscience Publishers, Inc., New York, 1959.

55. Battista O.A. Fundamentals of High Polymers, p. 115, Reinhold Publishing Corporation, NY, 1958.
56. Pillai J.C., A. Babor, and F.M. Plakogiannis, "Polymers in Cosmetic and Pharmaceutical Industries," Pharm.Acta Helv., 63(2), 46-53, 1988.
57. Callihan C.D., "Cellulose Derivatives; Polymers with a Future," Cellulose Technology Research (Gold, R.F. ed.), pp. 27-38, American Chemical Society, Washington, D.C., 1975.

APPENDICES

Table 23 : Weight Variation of Tablets from Combination 1*

NO.	Weight (mg)
1	111.8
2	114.2
3	114.1
4	112.9
5	111.7
6	112.2
7	111.4
8	113.9
9	112.5
10	112.7
11	112.8
12	113.0
13	114.0
14	114.0
15	113.0
16	111.7
17	111.9
18	113.7
19	112.7
20	112.5
Mean	112.8
SD	0.90

Table 24: The Amount of Indomethacin Released from Tablet Containing Methocel A 15LV.

%	Time (hr)	\sqrt{t}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
1	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.34	0.045	1.994	1.66	0.090	1.993
	0.50	0.707	1.72	0.000	1.992	1.89	0.025	1.992
	0.75	0.866	2.39	0.045	1.990	2.32	0.070	1.990
	1	1.000	2.92	0.090	1.987	2.84	0.095	1.988
	2	1.414	5.56	0.160	1.975	4.90	0.185	1.978
	4	2.000	11.28	0.745	1.948	9.36	0.340	1.957
	6	2.449	16.13	1.050	1.924	14.29	0.505	1.933
	9	3.000	22.29	1.290	1.890	20.09	0.810	1.903
	12	3.464	26.17	0.835	1.868	23.91	0.060	1.881
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.64	0.210	1.993	1.94	0.185	1.992
	0.50	0.707	2.46	0.090	1.989	2.54	0.020	1.989
	0.75	0.866	3.40	0.115	1.985	3.44	0.020	1.985
	1	1.000	4.15	0.095	1.982	4.06	0.140	1.982
	2	1.414	6.59	0.000	1.970	6.16	0.075	1.972
	4	2.000	10.31	0.230	1.953	9.50	0.120	1.957
	6	2.449	13.65	0.510	1.936	11.77	0.710	1.946
	9	3.000	16.91	1.140	1.920	14.58	0.855	1.932
	12	3.464	19.73	1.290	1.905	16.93	0.055	1.919
7.5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	3.32	0.230	1.985	2.89	0.205	1.987
	0.50	0.707	4.63	0.070	1.979	4.10	0.005	1.982
	0.75	0.866	5.93	0.075	1.973	5.48	0.230	1.976
	1	1.000	7.13	0.005	1.968	6.67	0.345	1.970
	2	1.414	10.94	0.465	1.950	11.31	1.090	1.948
	4	2.000	18.33	0.675	1.912	19.12	0.430	1.908
	6	2.449	26.98	1.285	1.863	25.49	0.045	1.872
	9	3.000	35.80	2.500	1.808	34.17	2.075	1.818
	12	3.464	43.35	2.480	1.753	41.23	0.995	1.769
10	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	5.72	0.460	1.974	4.07	0.415	1.982
	0.50	0.707	9.67	0.835	1.956	7.78	0.015	1.965
	0.75	0.866	17.25	1.030	1.918	12.64	0.690	1.941
	1	1.000	23.44	2.195	1.884	18.13	0.740	1.913
	2	1.414	41.51	4.530	1.767	32.34	1.975	1.830
	4	2.000	54.96	5.525	1.654	49.98	3.265	1.699
	6	2.449	62.94	6.275	1.569	58.83	3.760	1.615
	9	3.000	70.66	8.075	1.468	65.93	4.960	1.532
	12	3.464	74.65	7.240	1.404	71.95	4.780	1.448
15	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	6.12	0.255	1.973	4.71	0.415	1.979
	0.50	0.707	12.14	0.025	1.944	9.01	1.155	1.959
	0.75	0.866	17.58	0.440	1.916	13.75	1.475	1.936
	1	1.000	22.97	0.285	1.887	18.51	1.720	1.911
	2	1.414	38.20	1.675	1.791	31.11	1.205	1.838
	4	2.000	51.84	2.085	1.683	50.00	0.165	1.699
	6	2.449	61.63	0.200	1.584	58.62	1.320	1.617
	9	3.000	70.03	0.775	1.477	70.80	0.185	1.465
	12	3.464	77.82	2.985	1.346	74.10	0.190	1.413
20	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	10.80	0.280	1.950	8.36	0.275	1.962
	0.50	0.707	21.45	0.925	1.895	15.95	0.485	1.925
	0.75	0.866	35.44	1.625	1.810	24.85	0.075	1.876
	1	1.000	44.60	1.415	1.744	32.04	0.800	1.832
	2	1.414	65.51	1.315	1.538	55.01	1.960	1.653
	4	2.000	77.64	0.290	1.349	71.53	1.520	1.454
	6	2.449	86.90	0.410	1.117	80.85	0.385	1.282
	9	3.000	92.50	0.500	0.875	89.92	0.965	1.004
	12	3.464	97.12	0.880	0.459	95.73	0.055	0.631

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 25 : The Amount of Indomethacin Released from Tablet Containing Methocel A 4C.

%	Time (hr)	\sqrt{T}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.57	0.020	1.989	2.54	0.125	1.989
	0.50	0.707	3.13	0.150	1.986	2.99	0.155	1.987
	0.75	0.866	4.65	0.350	1.979	4.65	0.350	1.979
	1	1.000	5.53	0.215	1.975	5.60	0.330	1.975
	2	1.414	7.24	0.265	1.967	6.75	0.250	1.970
	4	2.000	12.00	0.795	1.945	10.60	0.310	1.951
	6	2.449	14.57	0.460	1.932	14.57	0.005	1.932
	9	3.000	18.48	0.525	1.911	17.17	0.185	1.918
12	3.464	23.00	1.675	1.887	20.57	0.255	1.900	
10	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	4.92	1.085	1.978	3.97	0.655	1.982
	0.50	0.707	7.99	1.350	1.964	7.10	1.325	1.968
	0.75	0.866	10.92	2.030	1.950	9.39	1.805	1.957
	1	1.000	13.53	2.380	1.937	11.48	2.375	1.947
	2	1.414	24.92	1.320	1.876	19.38	1.085	1.906
	4	2.000	46.26	0.315	1.730	29.77	1.705	1.847
	6	2.449	57.27	0.755	1.631	39.32	0.665	1.783
	9	3.000	66.66	0.080	1.523	47.36	0.480	1.721
12	3.464	71.54	0.175	1.454	52.14	1.420	1.680	
15	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	13.80	3.370	1.936	11.77	1.250	1.946
	0.50	0.707	34.96	4.145	1.813	33.22	2.600	1.825
	0.75	0.866	48.08	2.850	1.715	48.15	3.390	1.715
	1	1.000	55.07	2.650	1.653	56.30	3.425	1.641
	2	1.414	70.44	1.755	1.471	72.49	2.655	1.440
	4	2.000	82.51	1.310	1.243	84.82	2.685	1.181
	6	2.449	88.13	1.670	1.074	90.81	1.785	0.964
	9	3.000	92.88	0.880	0.852	95.12	1.230	0.688
12	3.464	94.56	1.120	0.736	96.94	0.430	0.486	
20	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	36.35	0.805	1.804	28.39	0.465	1.855
	0.50	0.707	43.53	1.205	1.752	48.90	1.075	1.708
	0.75	0.866	54.63	0.916	1.657	59.13	1.785	1.611
	1	1.000	61.98	1.459	1.580	65.08	1.340	1.543
	2	1.414	72.69	0.569	1.436	78.14	0.085	1.340
	4	2.000	86.01	2.038	1.146	89.13	0.840	1.036
	6	2.449	93.83	1.810	0.790	92.16	0.390	0.894
	9	3.000	97.84	0.785	0.335	96.72	0.280	0.516
12	3.464	97.04	1.741	0.471	99.94	0.065	-1.187	

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 26: The Amount of Indomethacin Released from Tablet Containing Methocel A 4M.

%	Time (hr)	\sqrt{T}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.47	0.300	1.989	2.87	0.045	1.987
	0.50	0.707	3.31	0.465	1.985	3.47	0.350	1.985
	0.75	0.866	4.20	0.585	1.981	4.45	0.420	1.980
	1	1.000	5.19	0.525	1.977	5.04	0.355	1.978
	2	1.414	7.55	1.080	1.966	6.96	0.060	1.969
	4	2.000	11.42	1.325	1.947	10.29	0.285	1.953
	6	2.449	14.50	1.245	1.932	13.26	0.470	1.938
	9	3.000	18.60	1.605	1.911	17.05	0.850	1.919
12	3.464	21.78	1.555	1.893	20.52	0.305	1.900	
10	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	6.07	2.190	1.973	3.35	0.345	1.985
	0.50	0.707	9.74	4.065	1.956	5.00	0.070	1.978
	0.75	0.866	13.40	5.125	1.938	6.09	0.330	1.973
	1	1.000	17.15	5.275	1.918	7.25	0.445	1.967
	2	1.414	29.31	5.630	1.849	11.55	0.475	1.947
	4	2.000	44.73	5.505	1.743	24.60	0.025	1.877
	6	2.449	54.28	5.030	1.660	32.32	0.190	1.830
	9	3.000	63.52	4.970	1.562	41.88	0.955	1.764
12	3.464	70.56	4.675	1.469	50.13	0.920	1.698	
15	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	40.50	0.810	1.775	36.12	1.035	1.805
	0.50	0.707	51.11	2.435	1.689	50.37	0.105	1.696
	0.75	0.866	58.25	2.115	1.621	58.65	0.240	1.616
	1	1.000	64.77	2.485	1.547	65.29	0.705	1.541
	2	1.414	77.12	1.930	1.359	77.88	1.060	1.345
	4	2.000	86.95	1.260	1.116	88.88	0.605	1.046
	6	2.449	91.58	1.045	0.926	94.33	0.190	0.754
	9	3.000	95.55	0.825	0.649	97.64	0.195	0.374
12	3.464	97.24	1.290	0.441	99.50	0.500	-0.301	
20	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	32.89	1.965	1.827	22.92	0.365	1.887
	0.50	0.707	46.40	1.060	1.729	43.76	1.815	1.750
	0.75	0.866	55.92	0.845	1.644	54.74	1.520	1.656
	1	1.000	59.99	0.620	1.602	60.18	5.260	1.600
	2	1.414	71.37	0.410	1.457	71.69	5.315	1.452
	4	2.000	81.37	0.040	1.270	81.81	4.565	1.260
	6	2.449	85.93	0.650	1.148	86.96	4.035	1.115
	9	3.000	90.89	0.385	0.960	91.81	3.385	0.914
12	3.464	93.81	0.425	0.792	95.43	2.145	0.660	

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 27: The Amount of Imdomethacin Released from Tablet Containing Methocel E 5.

%	Time (hr)	\sqrt{t}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
1	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.11	0.090	1.995	1.87	0.070	1.992
	0.50	0.707	1.75	0.255	1.992	2.17	0.070	1.990
	0.75	0.866	2.78	0.350	1.988	2.89	0.115	1.987
	1	1.000	3.69	0.585	1.984	3.68	0.320	1.984
	2	1.414	7.37	0.820	1.967	6.67	0.510	1.970
	4	2.000	13.94	1.040	1.935	13.18	0.060	1.939
	6	2.449	18.94	0.865	1.909	17.74	1.055	1.915
	9	3.000	25.95	2.790	1.870	25.22	0.690	1.874
	12	3.464	30.13	2.060	1.844	27.34	1.160	1.861
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.34	0.115	1.990	2.40	0.140	1.989
	0.50	0.707	3.05	0.210	1.987	2.59	0.255	1.989
	0.75	0.866	4.03	0.280	1.982	3.36	0.305	1.985
	1	1.000	4.81	0.190	1.979	4.23	0.445	1.981
	2	1.414	8.12	0.430	1.963	6.81	0.635	1.969
	4	2.000	16.96	2.445	1.919	11.91	0.780	1.945
	6	2.449	24.90	4.825	1.876	16.82	1.090	1.920
	9	3.000	35.07	7.025	1.812	22.22	1.425	1.891
	12	3.464	43.78	5.925	1.750	32.50	2.940	1.829
7.5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.38	0.025	1.990	2.13	0.045	1.991
	0.50	0.707	3.60	0.070	1.984	3.40	0.045	1.985
	0.75	0.866	5.21	0.070	1.977	5.09	0.000	1.977
	1	1.000	6.42	0.300	1.971	6.53	0.230	1.971
	2	1.414	10.35	0.605	1.953	11.71	0.715	1.946
	4	2.000	18.45	1.075	1.911	21.00	1.080	1.898
	6	2.449	25.71	1.545	1.871	28.76	1.280	1.853
	9	3.000	35.62	2.325	1.809	39.54	1.240	1.781
	12	3.464	42.90	1.680	1.757	48.69	1.690	1.710
10	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	9.70	0.785	1.956	7.90	0.645	1.964
	0.50	0.707	16.54	0.790	1.921	13.91	2.150	1.935
	0.75	0.866	22.05	0.780	1.892	18.98	3.680	1.909
	1	1.000	26.73	0.325	1.865	23.62	4.640	1.883
	2	1.414	43.40	0.380	1.753	39.39	5.295	1.783
	4	2.000	69.02	1.135	1.491	70.48	7.910	1.470
	6	2.449	91.25	1.885	0.942	87.99	6.035	1.080
	9	3.000	98.97	1.030	0.013	100.00	0.000	0.000
	12	3.464						
15	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	15.70	2.355	1.926	18.42	0.045	1.912
	0.50	0.707	29.37	2.680	1.849	30.95	0.275	1.839
	0.75	0.866	41.12	3.055	1.770	45.67	1.035	1.735
	1	1.000	53.11	2.395	1.671	56.67	2.085	1.637
	2	1.414	78.84	0.575	1.326	82.90	1.185	1.233
	4	2.000	92.28	0.225	0.888	97.19	0.735	0.449
	6	2.449	99.98	0.020	-1.699			
	9	3.000						
	12	3.464						
20	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	18.67	2.380	1.910	17.29	2.055	1.918
	0.50	0.707	35.17	6.140	1.812	33.12	5.860	1.825
	0.75	0.866	50.91	6.325	1.691	46.25	7.470	1.730
	1	1.000	63.69	5.470	1.560	57.38	8.705	1.630
	2	1.414	86.77	1.840	1.122	85.12	3.845	1.173
	4	2.000	98.10	1.160	0.279	93.08	1.690	0.840
	6	2.449				97.19	1.810	0.449
	9	3.000						
	12	3.464						

* = Mean of four determination (mg)

** = Log % drug remained in tablet

Table 28 : The Amount of Indomethacin Released from Tablet Containing Methocel E 15LV.

%	Time (hr)	\sqrt{t}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
1	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.75	0.150	1.992	1.71	0.090	1.993
	0.50	0.707	2.05	0.155	1.991	1.80	0.070	1.992
	0.75	0.866	2.74	0.080	1.988	2.49	0.045	1.989
	1	1.000	3.24	0.235	1.986	3.04	0.070	1.987
	2	1.414	5.99	0.910	1.973	5.43	0.440	1.976
	4	2.000	10.48	0.525	1.952	9.49	0.885	1.957
	6	2.449	14.42	1.415	1.932	13.67	0.960	1.936
	12	3.464	21.71	1.535	1.894	19.57	1.135	1.905
			26.01	1.685	1.869	24.88	1.035	1.876
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	3.37	0.185	1.985	3.53	0.020	1.984
	0.50	0.707	5.37	0.115	1.976	4.59	0.165	1.980
	0.75	0.866	6.97	0.460	1.969	6.23	0.230	1.972
	1	1.000	8.81	0.235	1.960	8.06	0.235	1.964
	2	1.414	13.86	1.230	1.935	12.29	0.330	1.943
	4	2.000	21.88	1.395	1.893	21.96	2.385	1.892
	6	2.449	32.47	2.215	1.830	32.24	0.725	1.831
	9	3.000	47.16	3.045	1.723	48.28	1.660	1.714
12	3.464	58.60	3.400	1.617	59.31	1.335	1.610	
7.5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	5.69	0.315	1.975	5.10	0.250	1.977
	0.50	0.707	11.31	0.595	1.948	9.29	0.970	1.958
	0.75	0.866	14.70	0.540	1.931	14.63	1.330	1.931
	1	1.000	19.45	0.855	1.906	19.04	1.805	1.908
	2	1.414	35.97	2.580	1.806	34.89	3.025	1.814
	4	2.000	67.03	3.630	1.518	64.72	6.195	1.548
	6	2.449	88.54	4.425	1.059	84.58	6.030	1.188
	9	3.000	100.00	0.000	0.000	97.55	2.450	0.389
12	3.464							
10	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	13.46	1.860	1.937	14.47	0.760	1.932
	0.50	0.707	26.99	1.985	1.863	27.32	0.770	1.861
	0.75	0.866	39.88	3.075	1.779	39.70	2.325	1.780
	1	1.000	49.05	5.220	1.707	49.25	2.925	1.705
	2	1.414	77.27	6.440	1.357	81.63	2.500	1.264
	4	2.000	97.49	0.985	0.401	95.56	1.025	0.648
	6	2.449						
	9	3.000						
12	3.464							
15	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	14.98	1.315	1.930	13.27	0.350	1.938
	0.50	0.707	28.62	1.840	1.854	24.96	0.955	1.875
	0.75	0.866	43.41	1.420	1.753	38.04	2.090	1.792
	1	1.000	54.73	1.685	1.656	49.77	3.265	1.701
	2	1.414	82.10	1.685	1.253	82.16	3.535	1.252
	4	2.000	95.68	0.780	0.635	94.48	2.535	0.742
	6	2.449						
	9	3.000						
12	3.464							
20	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	13.48	1.200	1.937	14.42	1.270	1.932
	0.50	0.707	25.08	1.675	1.875	25.92	2.695	1.870
	0.75	0.866	37.81	1.880	1.794	38.76	4.425	1.787
	1	1.000	48.61	1.670	1.711	49.45	4.820	1.704
	2	1.414	78.92	1.455	1.324	81.72	3.145	1.262
	4	2.000	96.40	0.695	0.557	99.30	0.705	-0.152
	6	2.449						
	9	3.000						
12	3.464							

* = Average of four determinations (mg)

** = Log % drug remained in tablet

Table 29: The Amount of Indomethacin Released from Tablet Containing Methocel K 4M.

%	Time (hr)	\sqrt{t}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	4.11	0.185	1.982	4.64	0.160	1.979
	0.50	0.707	7.64	0.395	1.966	8.41	0.045	1.962
	0.75	0.866	11.72	0.695	1.946	12.17	0.435	1.944
	1	1.000	16.18	1.400	1.923	16.43	0.790	1.922
	2	1.414	34.85	3.655	1.814	32.91	1.995	1.827
	4	2.000	67.51	6.070	1.512	67.51	4.420	1.512
	6	2.449	88.68	6.485	1.054	89.14	4.125	1.036
	9	3.000	99.08	0.925	-0.034	101.42	0.475	-
10	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	5.80	0.715	1.974	6.16	0.300	1.972
	0.50	0.707	11.77	1.735	1.946	11.17	0.210	1.949
	0.75	0.866	16.53	2.060	1.922	17.20	0.350	1.918
	1	1.000	22.63	2.635	1.889	23.16	0.585	1.886
	2	1.414	44.01	5.155	1.748	44.25	0.940	1.746
	4	2.000	80.26	2.440	1.295	78.54	1.760	1.332
6	2.449	98.34	1.665	0.221	96.25	0.390	0.574	

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 30: The Amount of Indomethacin Released from Tablet Containing Methocel K 100M.

%	Time (hr)	\sqrt{T}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
3	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	3.12	0.115	1.986	4.43	0.830	1.980
	0.50	0.707	6.25	0.395	1.972	6.42	0.425	1.971
	0.75	0.866	9.57	0.655	1.956	9.21	0.030	1.958
	1	1.000	12.86	0.655	1.940	12.18	0.265	1.944
	2	1.414	25.69	0.760	1.871	25.05	0.085	1.875
	4	2.000	52.21	0.085	1.679	51.28	1.050	1.688
	6	2.449	74.13	1.180	1.413	73.19	0.210	1.428
	9	3.000	96.06	0.155	0.596	96.03	0.100	0.599
	10	3.162	100.00	0.982	0.000	100.00	0.273	0.000

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 31 : The Amount of Indomethacin Released from Tablet containing Ethylcellulose 10 cps .

%	Time (hr)	\sqrt{T}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.10	0.070	1.991	1.92	0.255	1.992
	0.50	0.707	2.50	0.025	1.989	2.72	0.210	1.988
	0.75	0.866	3.10	0.045	1.986	3.24	0.190	1.986
	1	1.000	3.71	0.070	1.984	3.74	0.425	1.983
	2	1.414	5.76	0.185	1.974	5.64	0.310	1.975
	4	2.000	9.08	0.255	1.959	8.38	0.360	1.962
	6	2.449	11.53	0.305	1.947	10.55	0.135	1.952
	9	3.000	14.86	0.285	1.930	13.48	0.050	1.937
12	3.464	17.49	0.220	1.917	16.23	0.120	1.923	
10	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.01	0.115	1.991	1.96	0.210	1.991
	0.50	0.707	2.43	0.185	1.989	2.70	0.095	1.988
	0.75	0.866	3.12	0.210	1.986	3.14	0.050	1.986
	1	1.000	3.80	0.210	1.983	4.01	0.135	1.982
	2	1.414	5.87	0.170	1.974	5.76	0.040	1.974
	4	2.000	9.28	0.150	1.958	9.15	0.225	1.958
	6	2.449	11.92	0.040	1.945	10.84	0.160	1.950
	9	3.000	15.19	0.220	1.928	14.42	0.255	1.932
12	3.464	17.90	0.225	1.914	16.90	0.190	1.920	
15	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.83	0.115	1.992	1.48	0.045	1.994
	0.50	0.707	2.33	0.000	1.990	2.08	0.115	1.991
	0.75	0.866	2.96	0.045	1.987	2.42	0.025	1.989
	1	1.000	3.43	0.115	1.985	2.93	0.045	1.987
	2	1.414	5.47	0.050	1.976	4.76	0.050	1.979
	4	2.000	8.42	0.025	1.962	7.52	0.025	1.966
	6	2.449	10.63	0.025	1.951	9.44	0.020	1.957
	9	3.000	13.61	0.025	1.936	12.87	0.075	1.940
12	3.464	16.20	0.025	1.923	15.50	0.075	1.927	
20	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.71	0.185	1.993	2.01	0.160	1.991
	0.50	0.707	2.17	0.075	1.990	2.52	0.045	1.989
	0.75	0.866	2.86	0.190	1.987	3.24	0.045	1.986
	1	1.000	3.28	0.120	1.986	3.76	0.025	1.983
	2	1.414	5.03	0.075	1.978	5.78	0.020	1.974
	4	2.000	8.01	0.010	1.964	8.71	0.025	1.960
	6	2.449	9.99	0.040	1.954	11.02	0.025	1.949
	9	3.000	12.92	0.175	1.940	13.93	0.005	1.935
12	3.464	15.38	0.110	1.927	16.20	0.050	1.923	

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 32: The Amount Of Indomethacin Released From Tablet Containing
HPMCP HP-50.

%	Time (hr)	\sqrt{t}	Compressional Pressure					
			500 lb			1000 lb		
			Mean *	SD	**	Mean *	SD	**
1	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.50	0.100	1.993	1.66	0.000	1.993
	0.50	0.707	2.06	0.055	1.991	2.03	0.025	1.991
	0.75	0.866	2.57	0.235	1.989	2.60	0.210	1.989
	1	1.000	3.41	0.195	1.985	3.19	0.255	1.986
	2	1.414	6.16	0.055	1.972	5.39	0.580	1.976
	4	2.000	9.49	0.415	1.957	9.17	0.245	1.958
	6	2.449	15.65	0.245	1.926	13.93	0.525	1.935
3	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	1.61	0.050	1.993	1.57	0.230	1.993
	0.50	0.707	2.21	0.110	1.990	2.07	0.020	1.991
	0.75	0.866	2.87	0.030	1.987	2.90	0.140	1.987
	1	1.000	4.07	0.110	1.982	3.93	0.165	1.983
	2	1.414	7.90	0.195	1.964	7.11	0.385	1.968
	4	2.000	13.80	0.200	1.936	12.61	0.970	1.941
	6	2.449	18.58	0.230	1.911	16.40	1.025	1.922
5	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.34	0.005	1.990	1.89	0.140	1.992
	0.50	0.707	2.79	0.010	1.988	2.56	0.140	1.989
	0.75	0.866	4.02	0.095	1.982	3.47	0.185	1.985
	1	1.000	4.88	0.120	1.978	4.36	0.485	1.981
	2	1.414	8.73	0.230	1.960	8.47	0.720	1.962
	4	2.000	16.78	0.265	1.920	15.42	1.325	1.927
	6	2.449	22.75	0.250	1.888	20.20	1.105	1.902
7	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.78	0.000	1.988	2.57	0.255	1.989
	0.50	0.707	3.47	0.030	1.985	3.19	0.030	1.986
	0.75	0.866	4.35	0.020	1.981	4.13	0.085	1.982
	1	1.000	5.02	0.015	1.978	5.31	0.345	1.976
	2	1.414	9.63	0.270	1.956	9.52	0.115	1.957
	4	2.000	18.05	0.945	1.914	16.89	1.845	1.920
	6	2.449	22.60	0.625	1.889	21.36	1.010	1.896
12	0.00	0.000	0.00	0.000	2.000	0.00	0.000	2.000
	0.25	0.500	2.78	0.000	1.988	2.57	0.255	1.989
	0.50	0.707	3.47	0.030	1.985	3.19	0.030	1.986
	0.75	0.866	4.35	0.020	1.981	4.13	0.085	1.982
	1	1.000	5.02	0.015	1.978	5.31	0.345	1.976
	2	1.414	9.63	0.270	1.956	9.52	0.115	1.957
	4	2.000	18.05	0.945	1.914	16.89	1.845	1.920
	6	2.449	22.60	0.625	1.889	21.36	1.010	1.896

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 33: The Amount of Indomethacin Released from Blank
(1000 lb Compressional Pressure).

TIME (hr)	\sqrt{T}	Mean *	SD	**
0.00	0.000	0.00	0.000	2.000
0.25	0.500	1.92	0.024	1.992
0.50	0.707	2.19	0.113	1.990
0.75	0.866	2.81	0.097	1.988
1	1.000	3.49	0.320	1.985
2	1.414	6.09	0.210	1.973
4	2.000	10.66	0.198	1.951
6	2.449	15.76	0.048	1.926
9	3.000	21.24	0.355	1.896
12	3.464	27.24	0.361	1.862

* = Mean of four determinations (mg)

** = Log % drug remained in tablet

Table 34: The Amount of Indomethacin Released from
Indocid -R Capsule.

Time (hr)	\sqrt{T}	Mean *	SD	**
0.00	0.000	0.00	0.000	2.000
0.25	0.500	5.64	0.215	1.975
0.50	0.707	15.14	0.925	1.929
0.75	0.866	27.15	0.290	1.862
1	1.000	38.44	0.660	1.789
2	1.414	65.11	0.915	1.543
4	2.000	82.74	0.410	1.237
6	2.449	86.87	0.700	1.118
9	3.000	96.28	0.725	0.571
10	3.464	98.76	1.145	0.093

* = Mean of four determinations

** = Log % drug remained in capsule

Table 35: The Amount of Indomethacin Released from Combined Formulation (1000 lb Compressional Pressure).

Combination	Time (hr)	\sqrt{t}	Mean (i)	SD	(ii)
1	0.00	0.000	0.00	0.000	2.000
	0.25	0.500	6.10	0.275	1.973
	0.50	0.707	10.52	0.160	1.952
	0.75	0.866	15.25	0.300	1.928
	1	1.000	18.95	0.600	1.909
	2	1.414	30.82	1.185	1.840
	4	2.000	59.05	0.950	1.612
	6	2.449	77.45	1.665	1.353
	9	3.000	89.92	2.000	1.003
	12	3.464	99.39	0.615	-0.211
2	0.00	0.000	0.00	0.000	2.000
	0.25	0.500	5.74	0.885	1.974
	0.50	0.707	12.51	2.025	1.942
	0.75	0.866	18.25	1.875	1.913
	1	1.000	23.49	2.090	1.884
	2	1.414	48.69	3.795	1.710
	4	2.000	80.39	2.010	1.292
	6	2.449	92.06	3.055	0.900
	9	3.000	99.00	1.000	0.000
	12	3.464			
3	0.00	0.000	0.00	0.000	2.000
	0.25	0.500	4.69	0.535	1.979
	0.50	0.707	7.74	0.165	1.965
	0.75	0.866	10.68	0.170	1.951
	1	1.000	13.34	0.400	1.938
	2	1.414	19.21	1.975	1.907
	4	2.000	34.74	2.140	1.815
	6	2.449	51.64	2.250	1.684
	9	3.000	64.67	0.495	1.548
	12	3.464	75.29	3.040	1.393
1*	0.00	0.000	0.00	0.000	2.000
	0.25	0.500	5.43	0.025	1.976
	0.50	0.707	8.42	0.735	1.962
	0.75	0.866	12.29	0.560	1.943
	1	1.000	15.22	0.500	1.928
	2	1.414	25.01	0.435	1.875
	4	2.000	51.73	0.615	1.684
	6	2.449	72.08	0.925	1.446
	9	3.000	89.69	1.545	1.013
	12	3.464	100.00	0.000	0.000

(i) = Mean of four determinations (mg)

(ii) = Log % drug remained in tablet

**VITA**

Miss Suwannee Panpanawan was born on October 31, 1963. She got her degree in Bachelor of Science in Pharmacy in 1986 from Faculty of Pharmaceutical Sciences, Chiangmai University, Chiangmai, Thailand.