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DEVELOPMENT OF INDOMETHACIN SUSTAINED RELEASE TABLET
USING CELLULOSE DERIVATIVES AS A MATRIX SYSTEM

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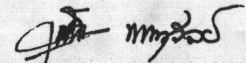
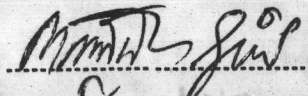
พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว

สุวรรณณี พรรณพนาวัลย์ : การพัฒนายาเม็ดออกฤทธิ์นานอินโดเมธาซินโดยใช้อนุพันธ์ของเซลลูโลสเป็นระบบเมทริกซ์ (DEVELOPMENT OF INDOMETHACIN SUSTAINED RELEASE TABLET USING CELLULOSE DERIVATIVES AS A MATRIX SYSTEM) อ.ที่ปรึกษา : ผศ.ดร. กาญจนพิมล ฤทธิเดช, 100 หน้า.

ยาเม็ดออกฤทธิ์นานอินโดเมธาซินที่ประกอบด้วยอนุพันธ์ของเซลลูโลสชนิดชอบน้ำ {methylcellulose (MC), hydroxypropylmethylcellulose (HPMC)} และ/หรือชนิดไม่ชอบน้ำ {ethylcellulose (EC), hydroxypropylmethylcellulose phthalate (HPMCP)} ในปริมาณต่าง ๆ กันได้เตรียมขึ้นโดยวิธีทำแกรนูลเปียก การศึกษาถึงการละลายพบว่า เฉพาะอนุพันธ์เซลลูโลสชนิดชอบน้ำเท่านั้นที่ความเข้มข้นของอนุพันธ์มีผลต่อรูปแบบและอัตราการปลดปล่อย ปริมาณยาที่ปลดปล่อยจะสูงขึ้นตามปริมาณของเซลลูโลสชนิดชอบน้ำ อัตราการปลดปล่อยยาอย่างไม่คงที่ สำหรับเซลลูโลสที่ไม่ชอบน้ำความสัมพันธ์ระหว่างปริมาณยาที่ปลดปล่อยต่อเวลาจากเมทริกซ์ที่เตรียมจาก EC และ HPMCP เป็นเส้นตรงโดยมีปริมาณที่ปลดปล่อยได้สูงสุดคือ 20%

ตำรับที่ประกอบด้วย HPMC 10% และ HPMCP 1% ให้ยาเม็ดที่มีการปลดปล่อยตัวยานอกหมดในอัตราคงที่ตลอดเวลา 12 ชั่วโมง กลไกการปลดปล่อยยาเป็นแบบการแพร่

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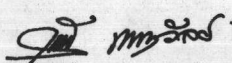

พิมพ์ต้นฉบับบทความวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว

SUWANNEE PANPANAWAN : DEVELOPMENT OF INDOMETHACIN SUSTAINED RELEASE TABLET USING CELLULOSE DERIVATIVES AS A MATRIX SYSTEM. THESIS
ADVISOR : ASSIST.PROF. GARNPIMOL C. RITTHIDEJ, Ph.D. 100 PP.

Indomethacin sustained release tablets containing various concentrations of hydrophilic {methylcellulose (MC), hydroxypropylmethylcellulose (HPMC)} and/or hydrophobic {ethylcellulose (EC), hydroxypropylmethylcellulose phthalate (HPMCP)} cellulose derivatives were prepared by means of wet granulation. Dissolution studies revealed that the effects of concentration of polymer on the release pattern occurred when using hydrophilic celluloses only. The amount of indomethacin released increased with the content of hydrophilic cellulose. Unconstant drug release was observed. For hydrophobic celluloses, concentration-time profiles with a maximum drug release of 20% were found from both EC and HPMCP matrices.

Formulation containing 10% of HPMC and 1% of HPMCP produced tablet of linear release profile as well as complete drug release for 12 hours. The mechanism of drug released was diffusion.

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CONTENTS

	Page
THAI ABSTRACT	iv
ENGLISH ABSTRACT	v
ACKNOWLEDGEMENT	vi
LIST OF TABLES	viii
LIST OF FIGURES	xii
CHAPTER	
1 INTRODUCTION	1
2 MATERIALS AND METHOD	30
3 RESULTS	38
4 DISCUSSION AND CONCLUSION	67
REFERENCES	79
APPENDICES	87
VITA	100



LIST OF TABLES

Table		Page
1	Polymers used in Controlled Release Devices.....	3
2	Criteria in Selection Polymers for Matrix Development.....	4
3	Solubility Data of Indomethacin.....	7
4	Various Forms of Indomethacin Sustained Release Reported in the Past Decade.....	9
5	Various Types of Methocel and Viscosity.....	11
6	Degree of Substitution an Typical Weight Percent Substitution for Methocel Premium Grades.	12
7	Solubility of Ethylcellulose in Various Solvents.	18
8	The Average Molecular Weight of HPMCP.....	21
9	Degree of Substitution in Various Grades of HPMCP.	22
10	Applications in Pharmaceutical Formulation or Technology of Talc.....	24
11	Formulation of Indomethacin Sustained Release Tablet.....	32
12	Percent of Polymer Used in Each Formulation.....	33

Table		Page
13	Percent of Polymer Used in Each Combined Formulation.....	34
14	Absorbance of Indomethacin in 1:4 Phosphate Buffer pH 7.2 : Deaerated Water Determined at 318 nm.....	38
15	Thickness, Hardness and Disintegration Time of Tablets Containing Methocel A.....	41
16	Thickness, Hardness and Disintegration Time of Tablets Containing Methocel E.....	42
17	Thickness, Hardness and Disintegration Time of Tablets Containing Methocel K.....	43
18	Thickness, Hardness and Disintegration Time of Tablets Containing Ethylcellulose (10 cps).....	44
19	Thickness, Hardness and Disintegration Time of Tablets Containing HPMCP HP-50.....	44
20	Thickness, Hardness and Disintegration Time of Tablets from Combined Formulations.....	46
21	Correlation Coefficient of Three Relationships I % Drug Released v.s. Time II % Drug Released v.s. Square Root Time III Log % Drug Remained v.s. Time.....	65

Table	Page
22	Correlation Coefficient of Three Relationships (Combined Formulations and Indocid-R)
	I % Drug Release v.s. Time
	II % Drug Release v.s. Square Root Time
	III Log % Drug Remained v.s. Time.....
	66
23	Weight Variation of Tablets from Combination 1*..
	88
24	The Amount of Indomethacin Release from Tablet Containing Methocel A 15 LV.....
	89
25	The Amount of Indomethacin Release from Tablet Containing Methocel A 4C.....
	90
26	The Amount of Indomethacin Release from Tablet Containing Methocel A 4M.....
	91
27	The Amount of Indomethacin Release from Tablet Containing Methocel E 5.....
	92
28	The Amount of Indomethacin Release from Tablet Containing Methocel E 15LV.....
	93
29	The Amount of Indomethacin Release from Tablet Containing Methocel K 4M.....
	94
30	The Amount of Indomethacin Release from Tablet Containing Methocel K 100M.....
	95
31	The Amount of Indomethacin Release from Tablet Containing Ethylcellulose 10 cps.....
	96

Table		Page
32	The Amount of Indomethacin Release from Tablet Containing HPMCP HP-50.....	97
33	The Amount of Indomethacin Released from Blank (1000 lb Compressional Pressure).....	98
34	The Amount of Indomethacin Released from Indocid-R Capsules.....	98
35	The Amount of Indomethacin Released from Combined Formulations(1000 lb Compressional Pressure).....	99



LIST OF FIGURES

Figure		Page
1	Structural Formula of Indomethacin.....	6
2	Structural Formula of Methylcellulose.....	13
3	Structural Formula of Hydroxypropylmethyl- cellulose.....	14
4	Structural Formula of Ethylcellulose.....	17
5	Structural Formula of HPMCP.....	20
6	Structural Formula of Magnesium Stearate..	23
7	Standard Curve of Indomethacin in 1:4 Phosphate Buffer pH 7.2 : Deaerated Water Determined at 318 nm.....	39
8	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of Methocel A 15LV Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	47
9	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of Methocel A 4C Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	49

Figure		Page
10	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of Methocel A 4M Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	50
11	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of Methocel E 5 Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	51
12	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of Methocel E 15LV Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	53
13	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of Methocel K 4M Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	54
14	Release Profiles of Indomethacin from Tablets Containing 3% of Methocel K 100M, Compared between Two Levels of Compressional Pressure (500 lb and 1,000 lb).....	55

Figure		Page
15	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of Ethylcellulose Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	57
16	Release Profiles of Indomethacin from Tablets Containing Various Concentrations of HPMCP Compressed at Two Levels of Compressional Pressure a) 500 lb and b) 1,000 lb.....	58
17	Release Profiles of Indomethacin from Tablets Produced without Polymer (Compressional Pressure = 1,000 lb).	59
18	Release Profiles of Indomethacin from Three Combined Formulations (Combinations 1-3) v.s. Indocid-R.....	60
19	The Amount of Indomethacin Release v.s. Square Root Time's Plot compared between Combined Formulations (Combinations 1-3) and Indocid-R.....	61
20	The First Order Plot of Indomethacin Release Compared between Combined Formulations (Combinations 1-3) and Indocid-R.....	62

Figure		Page
21	Comparison of Release Profile of Indomethacin between Combination 1 and 1*..	64
22	Diagram Showing Cellulose Molecules Banded Together to Form Ordered Nuclei (Crystallites)	69
23	Sketch Showing Crystalline Areas Embedded in a Matrix of Disorganized Chains of Cellulose.	70
24	Hydration Behavior of Cellulose Chain.....	72
25	Schematic Picture of the Initial Opening up of a Crystallite of Celluloses with the Formation of a Cellulose Derivatives.....	74