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APPLICATION OF CHITIN AND CHITOSAN AS FILM FORMERS  
IN PROPRANOLOL HYDROCHLORIDE  
SUSTAINED-RELEASE FILM COATED TABLETS  
COMPARED WITH CELLULOSES

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พิมพ์ต้นฉบับบทความวิจัยวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว

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การประเมินความเป็นไปได้ ของการนำไคติน และไคโตแซน มาประยุกต์ใช้ เป็นสารก่อฟิล์ม สำหรับการเคลือบยาเม็ดโดยใช้น้ำเป็นหลัก ด้วยวิธีพ่นเคลือบในหม้อเคลือบ โดยทำการศึกษาถึงคุณสมบัติทางกายภาพ และคุณสมบัติในการปลดปล่อยตัวยา ของยาเม็ดเคลือบฟิล์มที่เตรียมได้ เปรียบเทียบกับยาเม็ดเคลือบฟิล์มที่เตรียมจากสารก่อฟิล์มที่เป็นอนุพันธ์ของเซลลูโลส พบว่าคุณสมบัติการละลายน้ำของสารก่อฟิล์มเป็นปัจจัยสำคัญที่มีผลต่อคุณสมบัติในการปลดปล่อยตัวยา ของยาเม็ดเคลือบฟิล์ม การเพิ่มปริมาณการเคลือบบนผิวยาเม็ด หรือการเพิ่มสัดส่วนของสารก่อฟิล์ม ชนิดไม่ละลายน้ำ ในสูตรตำรับสารเคลือบฟิล์ม จะมีผลลดคุณสมบัติในการปลดปล่อยตัวยา จากยาเม็ดเคลือบฟิล์ม กลไกการปลดปล่อยตัวยาเป็นการแพร่ผ่านโครงสร้างของฟิล์มที่มีลักษณะเป็นรูพรุน ควบคู่ไปกับการขับของแรงดันออสโมติก ในการเปรียบเทียบกับยาเตรียมที่มีจำหน่ายในท้องตลาด พบว่ายาเม็ดเคลือบฟิล์มที่ให้การปลดปล่อยตัวยาเข้าตามมาตรฐานของ ภาสัชตำรับของประเทศสหรัฐอเมริกา ให้การปลดปล่อยตัวยาอย่างสมบูรณ์ภายใน 24 ชั่วโมง นอกจากนั้นยังทำการศึกษาถึงคุณสมบัติทางเทคโนโลยี และความสามารถในการดูดซึมซับความชื้นของแผ่นฟิล์มที่เตรียมโดยการใช้การเทออีกด้วย

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## Abbreviations

$^{\circ}\text{C}$	degree celsius
cm	centimeter
$\text{cm}^2$	centimeter square
gm	gram
hr	hour
I.D.	internal diameter
kg	kilogram
kp	kilopound
kV	kilovolt
log	logarithm
min	minute
mg	milligram
mL	milliliter
mm	millimeter
$\text{mm}^2$	millimeter square
mmol	millimolar
nm	nanometer
Pa	Pascal
rpm	revolution per minute
s, sec	second
semilog	semilogarithm
$\mu\text{g}$	microgram
$\mu\text{L}$	microliter
$\mu\text{m}$	micron, micrometer
w/w	weight by weight