



ผลของวิธีเตรียมแกรนูลต่อคุณสมบัติทางกายภาพของแกรนูล
และยาเม็ดโคอาซิแพม

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EFFECT OF GRANULATION METHODS ON THE PHYSICAL PROPERTIES
OF DIAZEPAM GRANULES
AND THEIR CORRESPONDING TABLETS



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การศึกษาเปรียบเทียบวิธีเตรียมแกรนูลด้วยมือ เครื่อง Oscillating และเครื่อง
 Fluid bed spray drying ต่อคุณสมบัติทางกายภาพของแกรนูลและยาเม็ดไดอาซีแพม

คุณสมบัติทางกายภาพของแกรนูลและยาเม็ดที่เตรียมจากแรงเบอร์ 30 ทั้งวิธีเตรียมด้วยมือ และ
 เครื่อง Oscillating ให้ผลดีกว่าแกรนูลและยาเม็ดที่เตรียมจากแรงเบอร์อื่น โดยเฉพาะอย่างยิ่งการไหล
 ของแกรนูล ความแตกต่างของน้ำหนักยาเม็ด, ความแตกต่างของความแข็งของยาเม็ด, การแตกตัว และ
 ความสม่ำเสมอของปริมาณตัวยาในยาเม็ด

คุณสมบัติทางกายภาพของแกรนูลและยาเม็ดที่เตรียมด้วยเครื่อง Fluid bed spray drying
 เมื่อใช้สารยึดเกาะ PVP 12 มก./เม็ด ให้ผลดีกว่าแกรนูลและยาเม็ดที่เตรียมจากสารยึดเกาะ 6,9 และ
 15 มก./เม็ด โดยเฉพาะอย่างยิ่งอัตราการไหลของแกรนูล, ความแตกต่างของน้ำหนักยาเม็ด, ความ
 แตกต่างของความแข็งและความสม่ำเสมอของปริมาณตัวยาในยาเม็ด เหตุผลอาจเนื่องจากแกรนูลที่ได้จาก
 วิธี Fluid bed spray drying มีลักษณะกลมกว่าแกรนูลที่ได้จากอีก 2 วิธี

จากวิธีเตรียมทั้ง 3 วิธี, ความแตกต่างในการใช้แรงที่เบอร์ต่างกัน และปริมาณสารยึดเกาะ
 ที่ใช้ ผลปรากฏว่า วิธี Fluid bed spray drying ที่เตรียมจากสารยึดเกาะ PVP 12 มก./เม็ด
 ให้คุณสมบัติทางกายภาพของแกรนูลและยาเม็ดไดอาซีแพมที่ดีที่สุด

ศูนย์วิทยทรัพยากร
 จุฬาลงกรณ์มหาวิทยาลัย

ภาควิชาเภสัชอุตสาหกรรม.....
 สาขาวิชา
 ปีการศึกษา 2532

ลายมือชื่อนิสิต
 ลายมือชื่ออาจารย์ที่ปรึกษา



CHAIYOT TITIRATSANON : EFFECT OF GRANULATION METHODS ON THE PHYSICAL PROPERTIES OF DIAZEPAM GRANULES AND THEIR CORRESPONDING TABLETS. THESIS ADVISOR : ASSIST.PROF.GARNPIMOL C.RITTHIDEJ, PH.D. 155 PP.

A study was carried out to compare the effect of the three different granulation methods by manual , oscillating and fluid bed spray drying methods on the physical properties such as of diazepam granules and tablets.

The physical properties of granules and tablets obtained by sieve number 30 both manual and oscillating methods were better than those obtained by sieve numbers 12,16,20 and 25 especially the flow rate, weight variation, hardness variation, disintegration time and content uniformity

By the fluid bed spray drying method, the physical properties of granules and tablets obtained by using 12 mg/tab of PVP as the binder were better than those obtained by using 6,9 and 15 mg/tab of PVP as the binder especially the flow rate , weight variation, hardness variation, and content uniformity. The reason was probably due to the granules obtained by fluid bed spray drying method were more spherical shape

Of three different methods, different sieve sizes and different amount of binder, fluid bed spray drving method was found to be the best method for manufacturing diazepam tablets when used 12 mg/tab of PVP as the binder

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CONTENTS

	page
ABSTRACT	iv
ABSTRACT.....	v
ACKNOWLEDGEMENTS.....	vi
LIST OF TABLES.....	viii
LIST OF FIGURES.....	xvii
CHAPTER	
I INTRODUCTION.....	1
II MATERIALS AND METHODS.....	28
III RESULTS.....	40
IV DISCUSSION AND CONCLUSION	99
REFERENCES.....	141
APPENDIX.....	148
VITA.....	156



LIST OF TABLES

TABLE	page
1. The absorbance of standard solution of diazepam in 5 % absolute ethanol in water at wavelength 312 nm.....	36
2. The absorbance of standard solution of diazepam in 0.1 N HCl at the wavelength 242 nm.....	38
3. Comparison of bulk volume of diazepam granules prepared by manual, oscillating and fluid bed spray drying methods.....	42
4. Comparison of % fine of diazepam granules prepared by manual, oscillating and fluid bed spray drying methods.....	46
5. Comparison of the size distribution of diazepam granules prepared by fluid bed spray drying method using different levels of PVP.....	57

TABLE (cont.)

page

6.	Influence of method of preparing on the mean diameter of diazepam granules prepared by manual and oscillating methods.....	59
7.	Influence of amount of PVP as granulating agent on the mean diameter of diazepam granules prepared by fluid bed spray drying method.....	59
8.	Comparison of flow rate of diazepam granules prepared by manual, oscillating and fluid bed spray drying methods.....	61
9.	Comparison of repose angle of diazepam granules prepared by manual, oscillating and fluid bed spray drying methods.....	66
10.	Comparison of weight of diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods.....	70
11.	Comparison of hardness of diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods.....	75
12.	Comparison of disintegration time of	

TABLE (cont.)

page

diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods.....	80
13. Comparison of % friability of diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods.....	86
14. Comparison of content uniformity of diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods.....	90
15. Comparison of % drug dissolved from diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods.....	94
16. ANOVA and DUNCAN's test of the bulk volume diazepam granules obtained by the three different methods ($\alpha = 0.05$).....	100
17. T-test of % fine of diazepam granules prepared by manual, oscillating and fluid bed spray drying methods.....	103
18. ANOVA and DUNCAN's test of the flow rate of diazepam granules obtained by the three	

TABLE (cont.)

page

methods($\alpha = 0.05$).....	106
19. T-test of repose angle of diazepam granules prepared by manual, oscillating and fluid bed spray drying methods($\alpha = 0.05$) $t=3.495$.	110
20. ANOVA and DUNCAN's test of % cv of weight of diazepam tablets obtained by the three different methods($\alpha = 0.05$).....	113
21. ANOVA and DUNCAN's test of % cv of hardness of diazepam tablets obtained by the three different methods($\alpha = 0.05$).....	116
22. ANOVA and DUNCAN's test of disintegration time of diazepam tablets obtained by the three different methods($\alpha = 0.05$).....	118
23. T-test of % friability of diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods($\alpha = 0.05$) $t=3.495$.	120
24. ANOVA and DUNCAN's test of % cv of content uniformity of diazepam tablets obtained by the three different methods($\alpha = 0.05$).....	122

TABLE (cont.)

page

25.	T-test of % drug dissolved of diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods($\alpha = 0.05$)...	123
26.	Comparison properties of diazepam granules prepared by manual method.....	127
27.	Comparison of properties of diazepam tablets prepared by manual method.....	128
28.	Comparison of properties of diazepam granules prepared by oscillating method.....	129
29.	Comparison of properties of diazepam tablets prepared by oscillating method.....	130
30.	Comparison of properties of diazepam granules prepared by fluid bed spray drying method using various amount of PVP as granulating agents.....	131
31.	Comparison of properties of diazepam tablets prepared by fluid bed spray drying method using various amount of PVP as granulating agents.....	132

TABLE (cont.)

page

32.	ANOVA and DUNCAN's test of the bulk volume of diazepam granules obtained by the three different methods($\alpha = 0.05$).....	133
33.	ANOVA and DUNCAN's test of flow rate of diazepam tablets prepared by the three different methods($\alpha = 0.05$).....	134
34.	ANOVA and DUNCAN's test of % cv of diazepam tablets prepared by the three different methods($\alpha = 0.05$).....	135
35.	ANOVA and DUNCAN's test of % cv of diazepam hardness obtained by the three different methods($\alpha = 0.05$).....	136
36.	ANOVA and DUNCAN's test of disintegration time of diazepam tablets obtained by the three different methods($\alpha = 0.05$).....	137
37.	ANOVA and DUNCAN's test of % cv of content uniformity of drug of diazepam tablets obtained by the three different methods ($\alpha = 0.05$).....	138

TABLE (cont.)

page

38.	Comparison of properties of diazepam by manual, oscillating and fluid bed spray drying methods.....	139
39.	Comparison of properties of diazepam tablets prepared by manual, oscillating and fluid bed spray drying methods.....	140
40.	Size-weight distribution of diazepam granules prepared by method using sieve number 12.....	149
41.	Size-weight distribution of diazepam granules prepared by method using sieve number 16.....	149
42.	Size-weight distribution of diazepam granules prepared by method using sieve number 20.....	150
43.	Size-weight distribution of diazepam granules prepared by method using sieve number 25.....	150
44.	Size-weight distribution of diazepam granules prepared by method using sieve	

TABLE (cont.)

page

number 30.....	151
45. Size-weight distribution of diazepam granules prepared by oscillating method using sieve number 12.....	151
46. Size-weight distribution of diazepam granules prepared by oscillating method using sieve number 16.....	152
47. Size-weight distribution of diazepam granules prepared by oscillating method using sieve number 20.....	152
48. Size-weight distribution of diazepam granules prepared by oscillating method using sieve number 25.....	153
49. Size-weight distribution of diazepam granules prepared by oscillating method using sieve number 30.....	153
50. Size-weight distribution of diazepam prepared by air suspension method using 15 mg/tab of PVP as granulating agent.....	154

TABLE (cont.)

page

51. Size-weight distribution of diazepam prepared by air suspension method using 12 mg/tab of PVP as granulating agent.....	154
52. Size-weight distribution of diazepam prepared by air suspension method using 9 mg/tab of PVP as granulating agent.....	155
53. Size-weight distribution of diazepam prepared by air suspension method using 6 mg/tab of PVP as granulating agent.....	155

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

LIST OF FIGURES

FIGURE	page
1. Four principal methods of measuring the angle of repose. I, Fixed-funnel and free-standing cone, II, Fixed-bed cone; III, Tilting box; IV, Revolving cylinder.....	12
2. A powder mixture.....	22
3. Standard curve of diazepam in 5 % ethanol in aqueous solution at the wavelength of 312 nm	37
4. Standard curve of diazepam in 0.1 N HCl at wavelength of 242 nm.....	39
5. Comparison of bulk volume prepared by manual and oscillating methods.....	41
6. Comparison of bulk volume of diazepam granules prepared by fluid bed spray drying method using various amounts of PVP as granulating agent.....	43

FIGURE (cont.)

7. Comparison of % fine of diazepam granules prepared by manual and oscillating methods..	45
8. Comparison of % fine of diazepam granules prepared by fluid bed spray drying method using various amounts of PVP as granulating agent.....	48
9. Comparison of size distribution of granule prepared by manual and oscillating method using sieve number 12.....	49
10. Comparison of size distribution of granule prepared by manual and oscillating method using sieve number 16.....	51
11. Comparison of size distribution of granule prepared by manual and oscillating method using sieve number 20.....	52
12. Comparison of size distribution of granule prepared by manual and oscillating method using sieve number 25.....	54
13. Comparison of size distribution of granule prepared by manual and oscillating method	

FIGURE (cont.)

page

using sieve number 30.....	55
14. Comparison of size distribution of granule prepared by fluid bed spray drying method using various amounts of PVP as granulating agent.....	58
15. Comparison of flow rate of diazepam granules prepared by manual and oscillating methods..	62
16. Comparison of flow rate diazepam granules prepared by fluid bed spray drying method using various amounts of PVP as granulating agent.....	64
17. Comparison of repose angle of diazepam granules prepared by manual and oscillating methods.....	67
18. Comparison of repose angle of diazepam granules prepared by fluid bed spray drying method using various amounts of PVP as granulating agent.....	68
19. Comparison of weight of diazepam tablets prepared by manual and oscillating methods..	71

FIGURE (cont.)

20. Comparison of weight of diazepam tablets prepared by fluid bed spray drying method using various amounts of PVP as granulating agent..... 73
21. Comparison of hardness of diazepam tablets prepared by manual and oscillating methods.. 76
22. Comparison of hardness of diazepam tablets prepared by fluid bed spray drying method using various amounts of PVP as granulating agent..... 77
23. Comparison of disintegration time of diazepam tablets prepared by manual and oscillating methods..... 81
24. Comparison of disintegration time of diazepam tablets prepared by fluid bed spray drying method using various amounts of PVP as granulating agent..... 82
25. Comparison of % friability of diazepam tablets prepared by manual and oscillating methods..... 85

FIGURE (cont.)

26. Comparison of % friability of diazepam tablets prepared by fluid bed spray drying method using various amounts of PVP as granulating agent..... 87

27. Comparison of content uniformity of diazepam tablets prepared by manual and oscillating methods..... 91

28. Comparison of content uniformity of diazepam tablets prepared by fluid bed spray drying method using various amounts of PVP as granulating agent..... 92

29. Comparison of % drug dissolved of diazepam tablets prepared by manual and oscillating methods..... 95

30. Comparison of % drug dissolved of diazepam tablets prepared by fluid bed spray drying using various amounts of PVP as granulating agent..... 96