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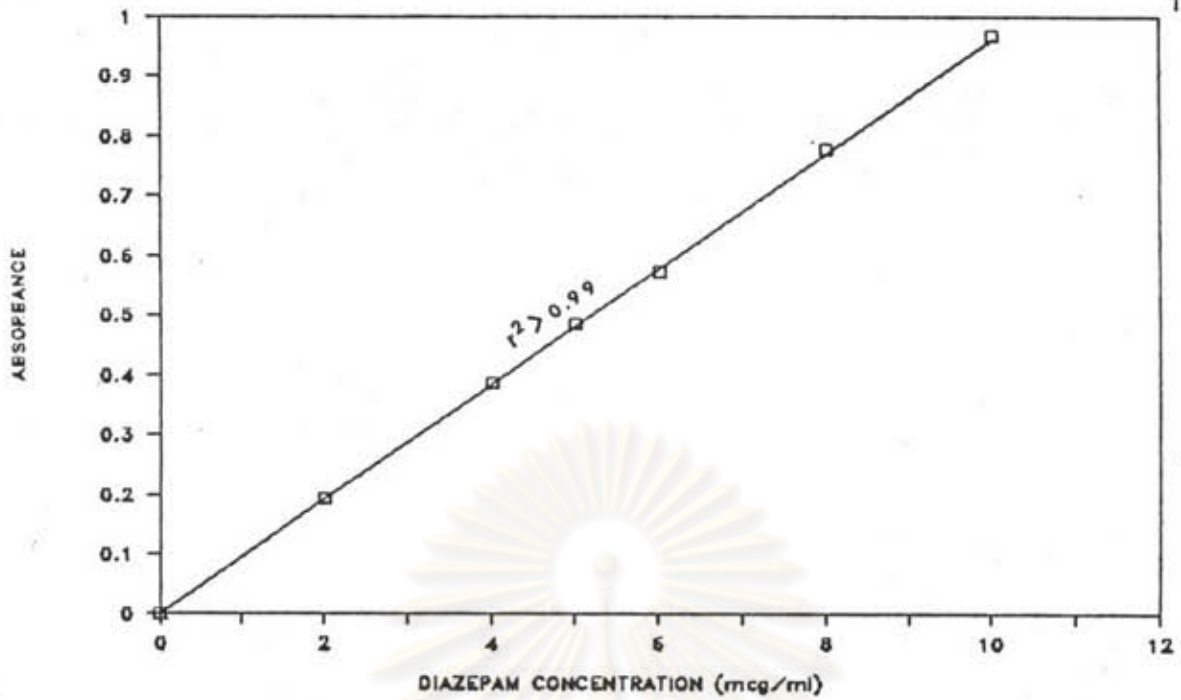
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Appendices

- A Standard Curve of Diazepam in 0.1 N. HCl
- B Standard Curve of Chlorpheniramine Maleate in Water
- C Data of Flowability of Sugar-Starch-PVP Granules
- D Data of Flowability of Sugar-Starch-Gelatin Granules
- E Data of Flowability of Sugar-Starch-Methylcellulose Granules
- F Data of Flowability of Sugar-Starch-Starch Granules
- G Effect of Aging on Dissolution of Diazepam Tablets Prepared from Sugar-Starch-PVP Granules
- H Effect of Aging on Dissolution of Diazepam Tablets Prepared from Sugar-Starch-Gelatin Granules
- I Effect of Aging on Dissolution of Diazepam Tablets Prepared from Sugar-Starch-Methylcellulose Granules
- J Effect of Aging on Dissolution of Diazepam Tablets Prepared from Sugar-Starch-Starch Granules
- K Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-PVP Granules
- L Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-Gelatin Granules
- M Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-Methylcellulose Granules
- N Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-Starch Granules
- O Effect of Aging on Dissolution of Diazepam Tablets Prepared from all Types of Storage Granules
- P Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from all Types of Storage Granules



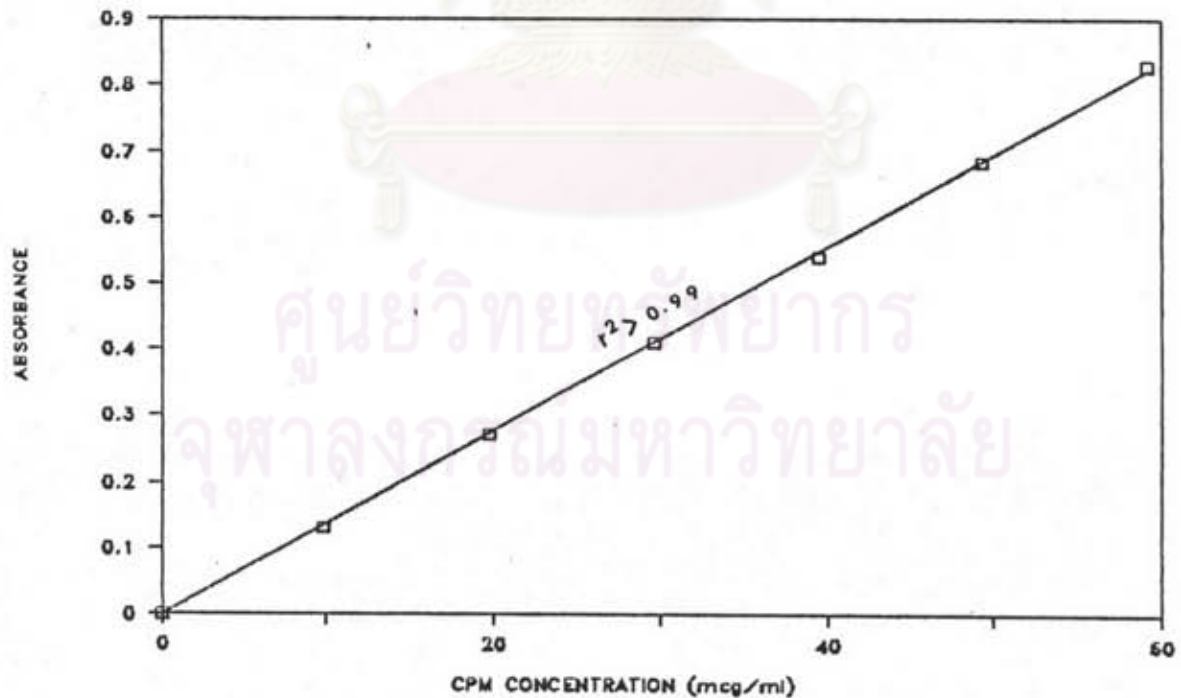
Appendix A Standard Curve of Diazepam in 0.1 N. HCl

Determine at $\lambda = 242 \text{ nm}$

$Y = 0.0863 X$

Y = Absorbance

X = Diazepam Concentration



Appendix B Standard Curve of Chlorpheniramine Maleate

in Water Determine at $\lambda = 262 \text{ nm}$

$Y = 0.0139 X$

Y = Absorbance

X = Chlorpheniramine Maleate Concentration

Appendix C Data of Flowability of Sugar-Starch-PVP
Granules between Mass Flow and
Time Intervals

Formula	Mass Flow (g)			
	0-4	Time Intervals (sec)		
		4-8	8-12	12-16
4	34.10 (1.88)	30.00 (2.13)	29.68 (1.53)	30.42 (1.35)
5	29.11 (1.48)	26.09 (0.52)	25.79 (0.27)	27.61 (1.17)
6	36.29 (2.23)	34.09 (1.39)	32.60 (1.34)	38.05 (1.50)
7	33.89 (1.47)	28.60 (0.96)	29.43 (1.62)	31.01 (1.78)
8	41.77 (2.10)	35.36 (0.55)	36.68 (2.33)	37.03 (1.31)
9	41.27 (0.51)	37.49 (0.21)	37.55 (1.81)	38.66 (0.84)

Means of three determinations with standard deviation
in parentheses.

The flow rate of granules from formula 1-3
could not be measured.

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Appendix D Data of Flowability of Sugar-Starch-Gelatin
Granules between Mass Flow and
Time Intervals

Formula	Mass Flow (g)			
	Time Intervals (sec)			
	0-4	4-8	8-12	12-16
9	29.64 (3.07)	29.32 (1.10)	30.59 (2.95)	30.46 (2.61)

Means of three determinations with standard deviation
in parentheses.

The flow rate of granules from formula 1-8
could not be measured.

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Appendix E Data of Flowability
of Sugar-Starch-Methylcellulose Granules
between Mass Flow and Time Intervals

Formula	Mass Flow (g)			
	Time Intervals (sec)			
	0-4	4-8	8-12	12-16
4	32.25 (2.15)	29.58 (2.04)	31.96 (1.82)	33.72 (2.12)
5	37.23 (0.62)	33.70 (0.27)	34.28 (1.94)	35.59 (1.22)
7	25.96 (3.12)	23.47 (2.84)	23.27 (2.93)	24.54 (1.13)
9	48.43 (3.85)	47.10 (1.28)	47.07 (1.64)	52.76 (0.40)

Means of three determinations with standard deviation
in parentheses.

The flow rate of granules from formula 1-3,6,8
could not be measured.

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Appendix F Data of Flowability
of Sugar-Starch-Starch Granules
between Mass Flow and Time Intervals

Formula	Mass Flow (g)			
	Time Intervals (sec)			
	0-4	4-8	8-12	12-16
1	26.12 (0.76)	25.21 (0.26)	23.56 (1.64)	26.66 (1.54)
3	35.08 (1.50)	32.25 (0.97)	31.44 (1.55)	35.35 (0.75)
5	42.49 (1.13)	38.37 (1.85)	39.54 (0.71)	39.26 (1.79)
6	41.73 (1.51)	41.25 (0.67)	37.74 (1.12)	41.71 (1.12)
7	47.22 (1.34)	42.16 (1.66)	43.39 (0.14)	43.78 (0.74)
8	41.33 (0.23)	40.06 (1.40)	38.64 (1.50)	40.63 (0.21)
9	44.48 (0.67)	41.16 (0.28)	38.16 (1.65)	40.85 (0.89)

Means of three determinations with standard deviation
in parentheses.

The flow rate of granules from formula 2,4
could not be measured.

Appendix G Effect of Aging on Dissolution of Diazepam
Tablets Prepared from Sugar-Starch-PVP Granules
after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage Mean±S.D.	32% R.H. Mean±S.D.	51% R.H. Mean±S.D.	75% R.H. Mean±S.D.
0	2	3.12±0.86	3.12±0.86	3.12±0.86	3.12±0.86
	5	26.00±4.07	26.00±4.07	26.00±4.07	26.00±4.07
	10	75.49±2.36	75.49±2.36	75.49±2.36	75.49±2.36
	15	99.33±1.95	99.33±1.95	99.33±1.95	99.33±1.95
	20	102.02±2.43	102.02±2.43	102.02±2.43	102.02±2.43
	30	101.07±2.21	101.07±2.21	101.07±2.21	101.07±2.21
1	2	3.24±0.78	1.98±0.78	3.53±1.67	2.34±0.89
	5	32.35±8.53	20.19±6.46	21.75±12.1	23.96±3.63
	10	76.02±4.23	65.96±9.38	64.58±11.9	60.99±2.81
	15	99.45±2.50	93.10±10.6	91.30±8.77	88.49±2.37
	20	103.40±2.42	101.73±1.92	101.67±0.86	99.03±0.92
	30	102.86±2.28	102.20±0.66	102.08±1.80	99.63±0.31
2	2	6.17±0.90	8.81±0.15	8.09±1.28	11.38±6.25
	5	36.24±5.21	34.27±4.21	35.53±5.50	31.09±7.46
	10	79.08±7.24	84.59±2.95	86.51±5.80	67.64±9.61
	15	101.49±2.51	103.94±2.44	103.94±1.47	94.30±7.07
	20	106.46±0.59	107.42±1.65	107.90±1.10	106.10±3.89
	30	104.30±0.52	106.28±1.77	106.94±0.88	106.70±2.83
3	2	4.43±0.56	6.95±0.81	4.25±1.06	6.17±2.30
	5	30.55±3.94	36.07±2.59	37.26±4.75	30.55±2.42
	10	68.48±6.21	82.61±5.40	84.89±5.88	62.31±5.24
	15	93.10±6.40	105.68±2.16	101.97±3.11	91.90±3.22
	20	101.43±0.45	108.08±2.06	103.34±0.64	103.70±1.87
	30	100.41±1.23	106.82±2.00	102.20±0.17	104.60±1.91

Appendix H Effect of Aging on Dissolution of Diazepam Tablets Prepared from Sugar-Starch-Gelatin Granules after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage Mean±S.D.	32% R.H. Mean±S.D.	51% R.H. Mean±S.D.	75% R.H. Mean±S.D.
0	2	10.18±0.22	10.18±0.22	10.18±0.22	10.18±0.22
	5	52.06±2.37	52.06±2.37	52.06±2.37	52.06±2.37
	10	98.79±0.86	98.79±0.86	98.79±0.86	98.79±0.86
	15	104.24±1.65	104.24±1.65	104.24±1.65	104.24±1.65
	20	103.64±1.74	103.64±1.74	103.64±1.74	103.64±1.74
	30	102.86±1.58	102.86±1.58	102.86±1.58	102.86±1.58
1	2	7.43±1.83	4.85±2.16	4.67±2.19	10.84±6.13
	5	56.37±2.42	39.72±7.13	42.36±5.13	45.71±8.08
	10	96.93±0.08	88.19±4.42	91.84±3.00	91.72±4.92
	15	103.94±0.52	102.44±2.08	101.79±0.74	101.73±1.15
	20	103.10±0.45	102.14±2.39	101.13±0.72	101.25±1.39
	30	101.85±0.37	101.01±2.44	100.71±0.81	99.57±1.30
2	2	8.87±3.52	12.46±3.45	13.90±5.17	8.27±4.23
	5	45.83±8.61	48.89±14.3	50.92±12.0	47.51±11.1
	10	92.74±2.02	97.53±7.51	97.95±7.23	96.21±2.25
	15	103.82±0.22	107.42±3.11	107.60±1.00	106.10±0.45
	20	103.40±0.45	107.48±2.26	106.46±0.95	105.98±0.90
	30	102.56±0.37	106.22±2.51	105.02±0.86	104.60±0.89
3	2	8.03±3.81	8.75±2.51	8.81±5.36	11.68±5.69
	5	46.19±9.53	47.15±10.7	49.25±10.1	53.02±9.85
	10	93.52±7.34	92.86±8.87	92.74±5.66	96.75±3.47
	15	104.36±1.50	105.86±1.11	101.67±1.45	104.78±1.03
	20	105.02±1.45	106.88±1.91	101.07±1.50	104.72±1.06
	30	103.70±1.17	106.28±1.77	99.57±1.55	102.98±1.30

Appendix I Effect of Aging on Dissolution of Diazepam Tablets Prepared from Sugar-Starch-Methylcellulose Granules after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage Mean±S.D.	32% R.H. Mean±S.D.	51% R.H. Mean±S.D.	75% R.H. Mean±S.D.
0	2	3.89±0.56	3.89±0.56	3.89±0.56	3.89±0.56
	5	10.90±0.08	10.90±0.08	10.90±0.08	10.90±0.08
	10	20.61±0.61	20.61±0.61	20.61±0.61	20.61±0.61
	15	29.48±1.28	29.48±1.28	29.48±1.28	29.48±1.28
	20	36.01±1.06	36.01±1.06	36.01±1.06	36.01±1.06
	30	49.84±0.52	49.84±0.52	49.84±0.52	49.84±0.52
	45	72.01±3.87	72.01±3.87	72.01±3.87	72.01±3.87
1	2	6.41±2.59	3.95±0.64	4.97±1.56	5.03±1.17
	5	8.93±1.08	7.61±1.69	8.69±1.28	9.29±0.98
	10	18.75±1.00	16.59±3.09	18.09±1.85	22.77±4.01
	15	26.42±1.25	23.30±3.79	25.28±2.00	30.25±4.18
	20	32.83±1.62	28.58±4.34	32.05±2.12	36.13±4.05
	30	45.23±2.35	37.80±5.17	41.52±2.61	46.85±2.73
	45	62.90±7.78	50.80±7.88	60.39±7.61	63.98±3.60
2	2	3.53±0.37	6.95±0.61	6.23±0.31	6.17±0.31
	5	11.32±0.73	14.92±0.64	12.46±3.23	13.48±0.82
	10	20.07±0.72	24.80±1.06	22.89±0.88	21.87±0.90
	15	26.72±0.31	31.87±2.44	29.42±0.59	29.00±0.34
	20	33.19±0.94	39.42±4.74	36.36±0.75	35.59±0.64
	30	44.33±3.23	51.52±7.09	46.85±1.95	46.31±1.45
	45	63.26±7.16	74.06±12.2	69.02±7.56	63.38±8.16
3	2	3.47±0.31	2.28±0.08	2.46±0.08	2.76±1.10
	5	10.84±0.17	10.06±0.15	15.10±0.39	10.42±0.82
	10	19.89±0.68	18.99±0.37	24.92±0.59	19.17±0.61
	15	26.72±1.44	25.52±0.92	31.51±0.52	25.82±0.47
	20	32.53±1.79	30.85±1.06	36.84±0.53	32.11±1.25
	30	47.03±3.14	40.38±0.93	46.97±0.47	42.89±2.79
	45	66.56±2.81	61.77±5.22	72.49±3.50	63.02±7.25
60	86.51±3.11	79.62±11.0	91.42±1.20	87.17±10.0	

Appendix J Effect of Aging on Dissolution of Diazepam Tablets Prepared from Sugar-Starch-Starch Granules after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage Mean±S.D.	32% R.H. Mean±S.D.	51% R.H. Mean±S.D.	75% R.H. Mean±S.D.
0	2	2.94±0.61	2.94±0.61	2.94±0.61	2.94±0.61
	5	12.04±1.40	12.04±1.40	12.04±1.40	12.04±1.40
	10	22.95±0.17	22.95±0.17	22.95±0.17	22.95±0.17
	15	30.55±0.44	30.55±0.44	30.55±0.44	30.55±0.44
	20	36.18±1.10	36.18±1.10	36.18±1.10	36.18±1.10
	30	45.17±1.72	45.17±1.72	45.17±1.72	45.17±1.72
	45	60.87±1.48	60.87±1.48	60.87±1.48	60.87±1.48
1	2	6.29±0.78	4.13±0.78	4.97±0.56	3.29±1.50
	5	15.40±0.85	12.58±1.34	13.48±0.29	11.68±2.42
	10	25.88±1.45	23.72±1.79	22.65±0.29	23.60±2.09
	15	33.85±1.78	31.81±2.45	29.48±0.67	30.37±2.55
	20	40.74±2.25	38.28±3.18	36.42±1.27	36.24±2.63
	30	53.56±3.52	51.10±5.51	45.89±1.62	46.55±2.07
	45	71.47±6.15	66.02±6.76	62.60±2.59	61.41±3.24
2	2	4.91±1.54	8.99±2.05	7.67±1.33	8.81±1.42
	5	13.60±1.92	17.61±2.03	16.83±2.94	17.37±1.67
	10	23.42±0.85	27.14±0.64	26.84±3.02	26.84±1.27
	15	30.19±1.06	33.91±0.56	37.56±3.30	34.15±1.55
	20	36.30±1.17	40.14±0.42	40.08±4.72	41.52±1.69
	30	47.21±0.69	56.07±2.50	51.58±4.44	55.54±4.23
	45	66.92±6.64	78.66±2.08	71.29±3.52	71.41±1.25
3	2	5.45±1.12	4.31±1.63	4.79±2.43	4.07±2.32
	5	14.14±0.86	12.94±1.28	18.09±1.99	14.68±1.39
	10	23.36±0.39	21.87±0.90	28.70±2.02	25.64±0.52
	15	30.67±0.45	28.70±0.61	36.72±2.04	33.19±1.69
	20	37.44±0.59	34.27±0.37	40.86±1.86	39.72±2.49
	30	50.32±2.16	43.85±0.89	56.19±4.42	51.64±3.98
	45	68.42±2.04	58.47±3.20	74.77±7.76	70.63±7.56
60	87.65±1.56	73.33±7.27	97.89±4.92	86.09±9.66	

Appendix K Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-PVP Granules after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage Mean±S.D.	32% R.H. Mean±S.D.	51% R.H. Mean±S.D.	75% R.H. Mean±S.D.
0	2	5.45±0.77	5.45±0.77	5.45±0.77	5.45±0.77
	5	14.45±1.68	14.45±1.68	14.45±1.68	14.45±1.68
	10	51.81±13.1	51.81±13.1	51.81±13.1	51.81±13.1
	15	79.08±17.9	79.08±17.9	79.08±17.9	79.08±17.9
	20	88.90±18.9	88.90±18.9	88.90±18.9	88.90±18.9
	30	99.26±5.10	99.26±5.10	99.26±5.10	99.26±5.10
	35	101.72±2.15	101.72±2.15	101.72±2.15	101.72±2.15
1	2	4.09±0.67	9.54±0.39	12.00±1.39	5.45±0.39
	5	16.91±8.30	12.54±1.39	16.91±1.93	13.91±4.82
	10	55.63±24.5	49.09±13.1	46.91±12.7	57.00±13.7
	15	74.45±25.7	76.90±20.2	78.27±21.2	77.45±17.7
	20	82.08±19.4	89.17±22.3	92.99±17.7	88.63±16.1
	30	89.99±13.8	100.08±13.5	100.36±7.45	94.08±10.7
	35	100.08±9.07	103.08±11.0	102.26±4.17	96.81±8.51
3	2	13.91±3.53	12.54±1.39	17.82±2.61	25.36±2.91
	5	17.73±3.30	23.18±2.04	19.09±3.68	42.54±1.77
	10	57.54±16.6	54.00±4.63	43.91±21.7	81.54±4.74
	15	86.99±23.7	86.17±6.56	77.45±25.9	102.81±1.02
	20	98.17±22.5	107.99±6.44	98.99±14.2	104.99±2.53
	30	103.63±14.8	107.72±6.21	103.63±5.99	103.63±1.39
	35	105.26±13.1	107.45±5.99	103.08±6.37	103.36±1.54

The data were missing at the 2 month of storage.

Appendix L Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-Gelatin Granules after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage	32% R.H.	51% R.H.	75% R.H.
		Mean±S.D.	Mean±S.D.	Mean±S.D.	Mean±S.D.
0	2	5.73±1.34	5.73±1.34	5.73±1.34	5.73±1.34
	5	16.36±3.72	16.36±3.72	16.36±3.72	16.36±3.72
	10	54.00±15.0	54.00±15.0	54.00±15.0	54.00±15.0
	15	83.45±19.6	83.45±19.6	83.45±19.6	83.45±19.6
	20	89.45±15.8	89.45±15.8	89.45±15.8	89.45±15.8
	30	97.08±2.53	97.08±2.53	97.08±2.53	97.08±2.53
	35	100.08±3.30	100.08±3.30	100.08±3.30	100.08±3.30
1	2	7.64±1.68	10.64±1.16	11.18±0.39	5.73±0.67
	5	28.36±11.2	16.36±2.41	33.27±8.03	19.36±5.10
	10	68.72±15.5	58.36±5.10	78.27±17.8	64.63±10.2
	15	87.27±11.4	87.81±5.01	95.45±14.8	89.45±8.90
	20	99.26±5.56	98.45±2.70	101.17±6.95	95.72±5.71
	30	102.26±3.72	101.99±2.35	104.45±0.77	100.08±1.68
	35	104.72±5.22	100.90±2.78	104.45±0.77	100.08±1.68
3	2	10.64±1.16	10.91±1.54	12.82±0.39	19.36±2.53
	5	18.82±8.21	24.54±5.82	17.18±3.72	37.63±2.91
	10	48.81±12.3	59.18±11.5	45.81±9.71	64.90±4.45
	15	72.27±17.0	84.54±14.3	69.54±17.0	87.27±3.68
	20	82.90±12.3	97.36±11.2	86.72±14.2	104.99±2.04
	30	96.27±12.3	105.26±10.9	100.63±17.3	103.90±0.67
	35	99.81±10.1	110.17±3.09	108.81±4.17	103.90±0.67

The data were missing at the 2 month of storage.

Appendix M Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-Methylcellulose Granules after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage Mean±S.D.	32% R.H. Mean±S.D.	51% R.H. Mean±S.D.	75% R.H. Mean±S.D.
0	2	2.73±2.70	2.73±2.70	2.73±2.70	2.73±2.70
	5	16.35±1.16	16.35±1.16	16.35±1.16	16.35±1.16
	10	25.89±2.04	25.89±2.04	25.89±2.04	25.89±2.04
	15	33.79±2.15	33.79±2.15	33.79±2.15	33.79±2.15
	20	44.42±4.34	44.42±4.34	44.42±4.34	44.42±4.34
	30	55.59±6.37	55.59±6.37	55.59±6.37	55.59±6.37
	45	69.76±10.2	69.76±10.2	69.76±10.2	69.76±10.2
1	2	3.82±0.39	5.81±3.29	10.08±0.77	5.18±0.77
	5	9.27±1.39	15.81±1.39	13.35±0.39	9.57±0.77
	10	21.53±2.70	29.70±1.39	21.80±1.68	20.98±1.39
	15	27.80±1.77	37.88±1.02	28.34±2.15	29.70±1.54
	20	34.61±3.01	44.15±0.67	33.52±2.41	35.15±2.00
	30	43.06±1.68	49.32±2.70	44.15±2.00	44.69±1.54
	45	52.87±2.34	62.13±1.16	53.14±2.91	53.41±1.02
2	2	8.45±0.39	5.72±0.67	6.27±0.39	6.81±0.77
	5	10.90±0.77	17.17±2.00	19.08±1.39	19.35±1.39
	10	20.44±1.16	32.16±1.68	32.97±1.02	33.79±1.39
	15	28.07±1.02	41.15±2.34	42.51±0.67	43.87±1.68
	20	34.34±1.34	48.78±1.93	49.60±0.39	50.69±1.77
	30	42.51±0.67	61.04±2.04	61.31±1.16	63.22±1.02
	45	52.87±1.02	73.49±1.02	72.76±1.16	74.58±2.70
3	2	9.98±3.83	8.72±2.70	10.90±0.39	10.36±0.77
	5	14.17±0.77	11.45±0.67	13.35±2.53	11.99±1.02
	10	22.35±1.02	19.35±1.54	22.07±3.06	22.07±2.31
	15	28.89±1.54	26.43±1.93	29.98±3.68	30.52±1.39
	20	34.61±2.15	32.43±1.54	35.70±4.29	37.33±1.54
	30	44.42±1.02	41.15±2.53	42.78±4.54	47.69±1.93
	45	52.05±2.53	51.23±2.78	53.41±4.08	54.50±3.08
60	59.13±2.70	61.59±1.93	62.68±4.44	65.67±3.15	

Appendix N Effect of Aging on Dissolution of Chlorpheniramine Maleate Tablets Prepared from Sugar-Starch-Starch Granules after Storage for 3 Months under Various Conditions

		% Drug Dissolved			
		Storage Conditions			
Month	Time (min)	Room Storage Mean±S.D.	32% R.H. Mean±S.D.	51% R.H. Mean±S.D.	75% R.H. Mean±S.D.
0	2	3.00±0.77	3.00±0.77	3.00±0.77	3.00±0.77
	5	7.36±2.41	7.36±2.41	7.36±2.41	7.36±2.41
	10	18.26±0.77	18.26±0.77	18.26±0.77	18.26±0.77
	15	25.89±3.80	25.89±3.80	25.89±3.80	25.89±3.80
	20	31.88±3.34	31.88±3.34	31.88±3.34	31.88±3.34
	30	40.88±2.00	40.88±2.00	40.88±2.00	40.88±2.00
	45	51.50±4.01	51.50±4.01	51.50±4.01	51.50±4.01
1	2	4.63±0.39	16.62±1.02	7.09±1.93	8.72±0.39
	5	13.90±1.77	16.90±1.02	14.17±0.77	13.08±2.00
	10	23.16±2.15	30.79±2.15	23.16±0.77	24.25±1.39
	15	30.25±1.77	37.61±2.91	29.43±0.67	33.25±2.15
	20	35.97±2.41	42.51±3.53	35.43±1.02	39.24±2.41
	30	44.15±2.31	52.59±4.29	43.87±1.39	48.51±3.15
	45	54.50±3.08	62.13±5.93	53.96±2.31	59.68±3.53
2	2	7.90±0.39	7.09±1.02	8.18±1.16	9.54±1.02
	5	12.26±1.77	17.44±1.02	22.35±3.43	20.71±2.78
	10	20.71±1.68	28.34±3.36	35.45±4.06	32.16±3.01
	15	26.71±2.70	34.34±4.67	43.87±4.83	39.51±3.68
	20	31.34±3.43	40.88±6.01	51.50±4.81	46.33±4.02
	30	39.51±4.74	50.41±8.81	61.59±6.82	57.50±5.40
	45	52.59±7.32	63.49±11.4	74.67±7.96	66.49±2.70
3	2	7.90±0.39	7.63±0.77	9.27±0.77	12.54±2.70
	5	14.44±0.39	11.72±1.39	10.08±1.93	15.26±0.39
	10	22.89±0.00	20.17±3.68	15.26±2.78	27.25±0.39
	15	28.61±1.16	26.34±5.01	20.17±2.70	35.97±1.16
	20	33.25±1.93	31.61±5.01	24.80±3.68	41.97±1.68
	30	41.69±3.53	39.79±6.34	32.70±3.53	53.14±3.72
	45	49.05±5.82	48.51±7.68	43.33±4.67	66.49±5.10
60	59.41±5.60	56.68±7.68	51.50±5.21	76.85±6.01	

Appendix 0 Effect of Aging on the Dissolution of Diazepam Tablets Prepared from all Types of Storage Granules

		% Drug Dissolved			
		Types of Granules			
Month	Time (min)	S-S-P ^A Mean±S.D.	S-S-G ^B Mean±S.D.	S-S-M ^C Mean±S.D.	S-S-T ^D Mean±S.D.
0	2	3.12±0.86	10.18±0.22	3.89±0.56	2.94±0.61
	5	26.00±4.07	52.06±2.37	10.90±0.08	12.04±1.40
	10	75.49±2.36	98.79±0.86	20.61±0.61	22.95±0.17
	15	99.33±1.95	104.24±1.65	29.48±1.28	30.55±0.44
	20	102.02±2.43	103.64±1.74	36.01±1.06	36.18±1.10
	30	101.07±2.21	102.86±1.58	49.84±0.52	45.17±1.72
	45	-	-	72.01±3.87	60.87±1.48
	60	-	-	91.36±2.20	77.88±6.65
1	2	2.88±1.78	7.13±1.00	4.61±1.81	5.99±1.28
	5	27.26±4.61	41.04±3.44	11.44±1.97	19.35±1.91
	10	78.72±3.70	92.74±2.08	22.23±1.95	27.68±1.91
	15	101.25±1.83	106.82±1.06	29.36±2.79	34.21±1.91
	20	104.24±0.00	107.12±1.16	35.41±4.42	40.02±2.06
	30	103.34±0.39	106.64±0.45	47.09±6.24	51.49±1.02
	45	-	-	70.03±9.40	77.52±9.02
	60	-	-	88.07±7.51	87.59±4.42
2	2	7.01±1.02	10.90±5.60	2.76±0.56	4.31±1.49
	5	31.21±2.72	41.40±7.98	9.88±0.89	12.34±1.62
	10	76.56±4.99	88.19±9.87	12.77±7.69	21.63±0.31
	15	101.43±1.78	107.00±2.84	25.82±1.89	28.40±0.15
	20	106.52±0.59	108.61±0.34	33.37±2.95	33.97±0.15
	30	105.62±0.34	107.42±0.17	45.83±6.05	44.33±1.53
	45	-	-	60.39±9.17	65.54±8.44
	60	-	-	73.69±9.96	81.12±11.5
3	2	5.63±0.61	6.95±0.81	3.24±0.53	5.39±1.84
	5	34.39±2.27	36.07±2.59	10.73±0.39	14.32±1.54
	10	80.76±4.52	82.61±5.40	19.41±0.76	24.14±1.00
	15	99.09±0.88	105.68±2.16	26.00±0.72	31.15±1.11
	20	101.31±2.95	108.08±2.06	31.51±0.42	37.26±1.14
	30	100.35±3.16	106.82±2.00	41.88±0.64	49.07±2.22
	45	-	-	61.17±4.54	65.66±4.60
	60	-	-	82.67±3.09	86.57±11.3

^A = Sugar-Starch-PVP

^C = Sugar-Starch-Methylcellulose

^B = Sugar-Starch-Gelatin

^D = Sugar-Starch-Starch

Appendix P Effect of Aging on the Dissolution of Chlorpheniramine Maleate Tablets Prepared from all Types of Storage Granules

		% Drug Dissolved			
		Types of Granules			
Month	Time (min)	S-S-P ^A Mean±S.D.	S-S-G ^B Mean±S.D.	S-S-M ^C Mean±S.D.	S-S-T ^D Mean±S.D.
0	2	5.45±0.77	5.73±1.34	2.73±2.70	3.00±0.77
	5	14.45±1.68	16.36±3.72	16.35±1.16	7.36±2.41
	10	51.81±13.1	54.00±5.06	25.89±2.04	18.26±0.77
	15	79.08±7.94	83.45±9.61	33.79±2.15	25.89±3.80
	20	88.90±8.96	89.45±5.81	44.42±4.34	31.88±3.34
	30	99.26±5.10	97.08±2.53	55.59±6.37	40.88±2.00
	35	101.72±2.15	100.08±3.30	-	-
	45	-	-	69.76±10.2	51.50±4.01
	60	-	-	74.12±10.5	65.40±8.34
1	2	1.91±0.39	13.36±0.39	10.08±0.77	8.99±0.67
	5	18.27±1.02	33.00±0.39	14.17±0.77	18.53±1.68
	10	64.09±5.40	77.45±10.2	25.89±0.77	30.52±0.77
	15	92.45±5.30	97.90±8.90	33.79±1.02	37.33±1.54
	20	101.17±2.15	103.90±4.01	38.97±1.02	39.24±3.06
	30	107.99±2.91	104.99±2.70	49.32±0.39	44.96±3.06
	35	107.17±3.06	104.99±2.70	-	-
	45	-	-	54.77±0.67	57.23±3.72
	60	-	-	62.68±1.02	68.13±3.43
2	2			8.72±0.77	9.81±1.77
	5			17.44±1.39	17.99±2.31
	10			28.07±1.68	25.62±1.39
	15	Missing Data	Missing Data	33.52±2.41	31.07±0.67
	20			38.42±2.41	34.61±0.39
	30			45.78±2.41	42.78±0.39
	35			-	-
	45			54.50±2.53	49.60±1.02
	60			61.59±2.70	56.95±1.02
3	2	13.09±3.06	12.54±1.68	6.27±1.39	6.00±1.02
	5	17.18±0.67	21.27±1.77	8.99±1.16	8.72±1.39
	10	47.18±3.30	64.36±11.6	18.26±1.68	16.35±2.00
	15	74.18±6.31	92.45±16.4	26.43±1.68	23.44±2.04
	20	91.90±4.35	105.26±10.8	32.43±2.04	28.61±2.00
	30	105.26±2.04	111.80±1.68	43.06±3.68	35.97±1.77
	35	106.63±2.04	112.08±1.71	-	-
	45	-	-	52.32±0.67	44.42±2.15
	60	-	-	58.59±0.77	50.96±2.34

^A = Sugar-Starch-PVP

^C = Sugar-Starch-Methylcellulose

^B = Sugar-Starch-Gelatin

^D = Sugar-Starch-Starch

**Vita**

Mr. Detpon Preechagoon was born on September 1, 1962. He got his degree in Bachelor of Pharmacy in 1986 from Faculty of Pharmacy, Mahidol University. He worked at Siamerican Pharmaceutical Co., Ltd. for one year during 1986-1987.



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