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APPENDIX

Calibration Curve

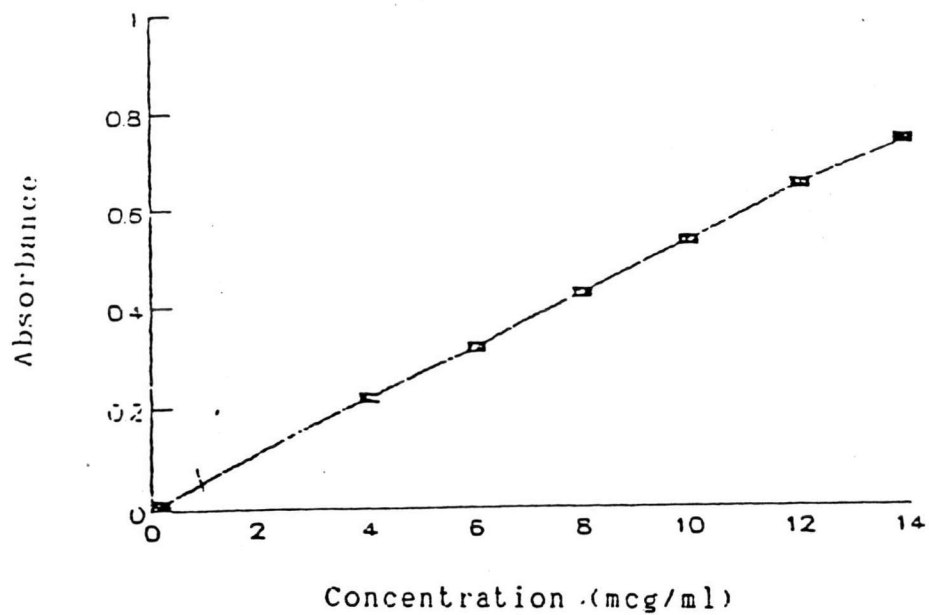
The concentration versus absorbance of Theophylline in 0.1 N HCl acid at 268.5 nm. and in phosphate buffer pH 6.8 at 270.3 nm. were presented in table 15 and 16, showed a linear relationship with the correlation coefficient 0.99411 and 0.99991 , respectively. The standard curves of theophylline after regression analysis were illustrated in Figure 88A and 88B

TABLE 15. Absorbance of Theophylline in 0.1N HCl Determine at 268.5 nm

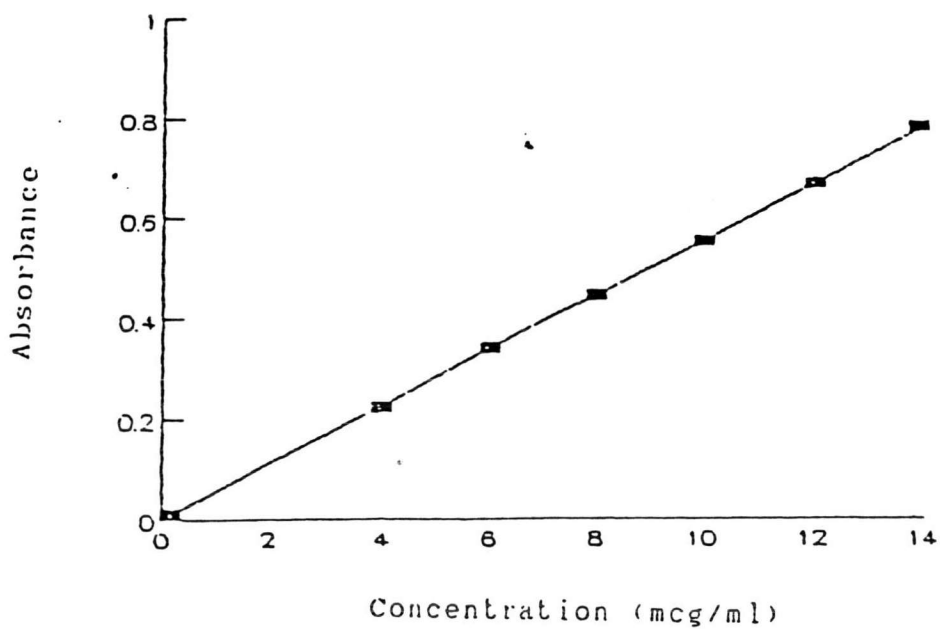
Concentration ($\mu\text{g}/\text{ml}$)	Absorbance
0	0.000
4	0.218
6	0.317
8	0.426
10	0.531
12	0.645
14	0.737

TABLE 16. Absorbance of Theophylline in Phosphate Buffer
pH 6.8 Determined at 270.3 nm

Concentration ($\mu\text{g}/\text{ml}$)	Absorbance
0	0.000
4	0.224
6	0.340
8	0.447
10	0.556
12	0.669
14	0.779



A



B

Figure 88 Calibration Curve of Theophylline in

A) 0.1 N HCl at 268.5 nm.

B) Phosphate Buffer pH 6.8 at 270.3 nm.

TABLE 18. Amount Percent of Theophylline from Uncoated Granule by Basket Method in Buffer PH 6.8

DILUENT	TIME (MIN)	%*	SD
AVICEL	0.00	0.00	0.00
	5.00	31.86	1.00
	10.00	43.69	2.19
	15.00	55.09	0.76
	20.00	63.74	0.37
	25.00	70.86	1.24
	30.00	75.97	0.12
CORN STARCH	0.00	0.00	0.00
	5.00	38.97	0.36
	10.00	64.66	2.00
	15.00	83.11	3.57
	20.00	91.07	1.74
	25.00	95.17	0.70
	30.00	97.62	0.00
EMCOMPRESS	0.00	0.00	0.00
	5.00	38.70	2.63
	10.00	57.29	2.05
	15.00	74.37	2.23
	20.00	86.49	1.06
	25.00	90.96	0.98
	30.00	92.52	0.24
LACTOSE	0.00	0.00	0.00
	5.00	37.37	1.02
	10.00	62.79	3.08
	15.00	85.19	2.77
	20.00	90.74	0.96
	25.00	95.46	0.00
	30.00	96.77	0.18

*Cumulative % drug Release

TABLE 19. Amount Percent of Theophylline Release from Coated Granules Containing Avicel PH101^R as Filler in PH Change Method

PERCENT COATED	Time(hours)	%*	SD
10.00	0.00	0.00	0.00
	0.25	3.97	1.20
	0.50	8.27	2.14
	0.75	14.27	1.64
	1.00	20.11	3.30
	2.00	44.42	2.40
	3.00	80.55	1.60
	4.00	97.70	3.20
	5.00	99.75	1.70
	6.00	98.89	0.97
	7.00	99.88	1.43
	8.00	100.00	2.40
	10.00	100.00	2.35
12.00	99.92	0.08	
15.00	0.00	0.00	0.00
	0.25	4.94	2.40
	0.50	7.79	2.25
	0.75	12.16	3.14
	1.00	16.91	2.65
	2.00	36.24	1.42
	3.00	59.57	1.56
	4.00	72.96	2.10
	5.00	78.28	1.48
	6.00	83.99	4.31
	7.00	85.74	2.45
	8.00	83.42	3.30
	10.00	85.07	2.54
12.00	87.61	1.79	
20.00	0.00	0.00	0.00
	0.25	1.78	1.49
	0.50	2.30	1.96
	0.75	3.20	2.77
	1.00	3.99	1.35
	2.00	13.76	0.97
	3.00	23.25	1.78
	4.00	34.53	2.63
	5.00	52.37	1.94
	6.00	57.10	1.01
	7.00	64.97	3.45
	8.00	69.36	1.56
	10.00	72.69	2.43
12.00	75.58	2.51	

*Cumulative % drug Release

TABLE 20. Amount Percent of Theophylline Release from Coated Granule Containing Corn Starch as Filler in PH Change Method

PERCENT COATED	Time(hours)	%*	SD
10.00	0.00	0.00	0.00
	0.25	6.19	1.55
	0.50	10.11	2.14
	0.75	14.49	1.85
	1.00	17.61	1.97
	2.00	28.09	2.78
	3.00	41.69	3.32
	4.00	52.22	3.45
	5.00	62.29	2.65
	6.00	68.75	2.87
	7.00	73.65	1.89
	8.00	75.83	2.51
	10.00	78.84	3.54
12.00	77.49	2.76	
15.00	0.00	0.00	0.00
	0.25	4.34	1.13
	0.50	5.90	2.50
	0.75	7.40	2.77
	1.00	10.20	1.94
	2.00	18.18	3.36
	3.00	25.30	2.71
	4.00	36.45	2.45
	5.00	56.26	1.59
	6.00	61.91	2.69
	7.00	63.79	3.21
	8.00	66.79	1.65
	10.00	70.02	2.88
12.00	69.76	2.75	
20.00	0.00	0.00	0.00
	0.25	4.34	2.50
	0.50	5.63	1.69
	0.75	8.20	3.21
	1.00	10.23	2.64
	2.00	18.05	2.58
	3.00	24.32	1.96
	4.00	28.75	2.97
	5.00	43.95	3.45
	6.00	48.33	3.56
	7.00	52.71	2.87
	8.00	55.68	4.10
	10.00	58.41	2.50
12.00	61.29	2.64	

*Cumulative % drug Release

TABLE 21. Amount Percent of Theophylline Release from Coated Granules Containing Emcompress^R as Filler in PH Change Method

PERCENT COATED	Time(hours)	%*	SD
10.00	0.00	0.00	0.00
	0.25	3.38	1.56
	0.50	5.73	2.54
	0.75	6.74	1.89
	1.00	11.96	3.41
	2.00	22.39	2.56
	3.00	32.32	2.20
	4.00	37.90	2.78
	5.00	43.29	1.89
	6.00	46.11	2.50
	7.00	48.86	2.78
	8.00	51.35	2.51
	10.00	55.28	1.26
12.00	57.95	3.01	
15.00	0.00	0.00	0.00
	0.25	1.80	2.10
	0.50	3.05	2.05
	0.75	4.67	1.37
	1.00	5.31	1.56
	2.00	9.93	1.84
	3.00	12.80	2.10
	4.00	15.77	2.62
	5.00	19.01	2.47
	6.00	22.52	2.25
	7.00	26.67	1.36
	8.00	32.45	1.97
	10.00	38.44	2.26
12.00	45.61	1.12	
20.00	0.00	0.00	0.00
	0.25	1.89	1.33
	0.50	2.62	2.54
	0.75	4.11	2.37
	1.00	7.80	1.89
	2.00	12.88	2.41
	3.00	20.59	2.53
	4.00	31.33	1.54
	5.00	34.50	1.23
	6.00	34.44	1.14
	7.00	38.15	1.30
	8.00	41.53	1.42
	10.00	44.68	1.63
12.00	46.63	5.23	

*Cumulative % drug Release

TABLE 22. Amount Percent of Theophylline Release from Coated Granules Containing Lactose as Filler in PH Change Method

PERCENT COATED	Time(hours)	%*	SD
10.00	0.00	0.00	0.00
	0.25	4.68	1.65
	0.50	8.06	2.45
	0.75	11.19	2.35
	1.00	14.00	1.11
	2.00	26.15	1.68
	3.00	36.13	2.65
	4.00	45.41	3.10
	5.00	54.53	2.70
	6.00	58.35	2.14
	7.00	64.16	1.62
	8.00	69.19	2.35
	10.00	75.14	2.47
12.00	78.53	2.55	
15.00	0.00	0.00	0.00
	0.25	1.75	2.54
	0.50	2.72	2.14
	0.75	4.03	2.63
	1.00	5.49	3.20
	2.00	11.52	2.40
	3.00	19.72	1.56
	4.00	32.24	1.78
	5.00	41.05	2.90
	6.00	48.22	2.61
	7.00	53.29	2.41
	8.00	55.11	3.24
	10.00	61.57	2.41
12.00	65.83	2.31	
20.00	0.00	0.00	0.00
	0.25	1.60	1.67
	0.50	2.79	2.10
	0.75	3.69	2.64
	1.00	3.58	2.47
	2.00	5.96	3.14
	3.00	17.14	3.40
	4.00	28.12	2.65
	5.00	33.51	2.47
	6.00	37.01	1.62
	7.00	40.32	1.84
	8.00	41.01	2.46
	10.00	44.18	1.54
12.00	48.57	1.63	

*Cumulative % drug Release

TABLE 23. Amount Percent of Theophylline Release from Tablet.
Prepared from Coated Granules Containing Avicel
PH101^R as Filler

Formulations	Time(hours)	%*	SD
Avicel PH101 (10%A1)	0.00	0.00	0.00
	0.25	17.12	0.95
	0.50	26.92	2.55
	0.75	33.48	2.14
	1.00	38.65	3.55
	2.00	56.11	2.58
	3.00	72.27	3.84
	4.00	80.39	5.32
	5.00	83.81	7.36
	6.00	85.13	2.35
	7.00	89.47	1.00
	8.00	91.22	4.73
	10.00	99.84	3.42
12.00	91.77	1.55	
Avicel PH101 (10%A2)	0.00	0.00	0.00
	0.25	7.81	3.56
	0.50	18.15	4.57
	0.75	27.57	5.53
	1.00	34.69	6.32
	2.00	52.41	5.44
	3.00	62.95	4.87
	4.00	69.21	6.77
	5.00	74.26	7.23
	6.00	77.95	4.52
	7.00	79.21	4.71
	8.00	83.10	3.48
	10.00	84.63	3.77
12.00	87.90	4.02	
Avicel PH101 (10%A3)	0.00	0.00	0.00
	0.25	16.74	2.25
	0.50	27.21	3.55
	0.75	33.78	4.56
	1.00	40.94	4.20
	2.00	60.62	3.90
	3.00	83.58	5.00
	4.00	90.79	2.67
	5.00	92.56	3.19
	6.00	95.90	3.48
	7.00	97.46	2.60
	8.00	98.93	3.10
	10.00	99.00	3.40
12.00	99.00	2.65	

*Cumulative % drug Release

TABLE 23. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Avicel PH101^P as Filler (cont.)

Formulations	Time(hours)	%*	SD
Avicel PH101 (10%A4)	0.00	0.00	0.00
	0.25	7.64	1.10
	0.50	22.93	3.29
	0.75	31.78	2.63
	1.00	39.01	3.54
	2.00	66.38	3.34
	3.00	75.78	9.42
	4.00	87.14	5.56
	5.00	89.68	9.28
	6.00	93.63	3.02
	7.00	96.31	5.31
	8.00	97.62	7.12
	10.00	99.00	2.60
12.00	98.74	8.55	
Avicel PH101 (10%A5)	0.00	0.00	0.00
	0.25	11.57	2.88
	0.50	20.71	2.50
	0.75	29.14	1.77
	1.00	36.16	2.59
	2.00	53.70	4.21
	3.00	63.65	2.56
	4.00	72.94	3.42
	5.00	76.99	3.54
	6.00	84.75	3.26
	7.00	86.98	2.66
	8.00	90.50	3.56
	10.00	93.58	2.67
12.00	91.64	3.15	
Avicel PH101 (10%A6)	0.00	0.00	0.00
	0.25	3.25	1.11
	0.50	10.05	4.89
	0.75	17.26	7.12
	1.00	24.96	9.20
	2.00	46.73	14.57
	3.00	58.81	12.71
	4.00	68.48	11.26
	5.00	74.21	9.99
	6.00	79.04	4.43
	7.00	82.01	10.73
	8.00	85.33	10.96
	10.00	88.86	9.69
12.00	92.73	3.85	

*Cumulative % drug Release

TABLE 22. Amount Percent of Theophylline Release from Tablet.
Prepared from Coated Granules Containing Avicel
PH101^R as Filler (cont.)

Formulations	Time (hours)	%*	SD
Avicel PH101 (15%A1)	0.00	0.00	0.00
	0.25	12.06	1.24
	0.50	21.32	3.25
	0.75	28.38	2.31
	1.00	34.32	3.55
	2.00	47.55	4.21
	3.00	58.13	3.33
	4.00	66.02	3.85
	5.00	69.74	2.56
	6.00	73.80	2.41
	7.00	76.77	4.50
	8.00	78.14	4.22
	10.00	82.00	2.31
12.00	84.81	2.55	
Avicel PH101 (15%A2)	0.00	0.00	0.00
	0.25	5.32	4.50
	0.50	16.52	3.99
	0.75	24.65	5.64
	1.00	28.31	6.57
	2.00	38.85	7.23
	3.00	50.47	5.47
	4.00	55.46	8.62
	5.00	64.51	7.56
	6.00	69.54	6.33
	7.00	72.66	4.23
	8.00	75.32	7.45
	10.00	80.04	2.17
12.00	82.33	2.02	
Avicel PH101 (15%A3)	0.00	0.00	0.00
	0.25	12.64	2.72
	0.50	21.48	1.34
	0.75	29.08	2.56
	1.00	34.89	2.47
	2.00	49.03	4.69
	3.00	65.41	3.28
	4.00	74.48	4.02
	5.00	83.10	3.99
	6.00	84.39	3.73
	7.00	85.13	1.22
	8.00	89.54	1.93
	10.00	91.40	2.04
12.00	92.73	1.77	

*Cumulative % drug Release

TABLE 23. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Avicel PH101[®] as Filler (cont.)

Formulations-	Time(hours)	%*	SD
Avicel PH101 (15%A4)	0.00	0.00	0.00
	0.25	3.14	1.83
	0.50	8.49	2.44
	0.75	18.31	7.14
	1.00	20.24	5.06
	2.00	41.84	4.06
	3.00	50.36	2.26
	4.00	61.61	6.03
	5.00	65.47	7.52
	6.00	74.13	5.66
	7.00	76.21	2.99
	8.00	80.93	3.96
	10.00	84.23	3.40
12.00	86.16	4.14	
Avicel PH101 (15%A5)	0.00	0.00	0.00
	0.25	3.27	1.50
	0.50	15.95	1.24
	0.75	22.14	4.50
	1.00	26.48	2.56
	2.00	38.55	3.55
	3.00	49.36	3.32
	4.00	56.70	2.95
	5.00	63.11	2.54
	6.00	67.24	4.02
	7.00	69.83	3.85
	8.00	70.64	3.56
	10.00	74.00	4.64
12.00	79.11	2.56	
Avicel PH101 (15%A6)	0.00	0.00	0.00
	0.25	4.56	0.82
	0.50	10.77	2.41
	0.75	17.96	0.45
	1.00	24.76	1.62
	2.00	44.78	7.40
	3.00	56.87	4.61
	4.00	65.60	6.26
	5.00	73.07	7.29
	6.00	78.46	3.79
	7.00	82.75	2.29
	8.00	85.74	7.52
	10.00	90.88	8.21
12.00	91.64	5.50	

*Cumulative % drug Release

TABLE 23. Amount Percent of Theophylline Release from Tablet.
 Prepared from Coated Granules Containing Avicel
 PH101[®] as Filler (cont.)

Formulations	Time(hours)	%*	SD
Avicel PH101 (20%A1)	0.00	0.00	0.00
	0.25	5.05	1.55
	0.50	9.00	2.41
	0.75	12.58	2.66
	1.00	15.85	2.81
	2.00	26.43	1.34
	3.00	34.37	1.88
	4.00	41.48	1.08
	5.00	45.75	1.72
	6.00	50.36	2.44
	7.00	54.75	3.59
	8.00	59.25	4.43
	10.00	62.74	2.56
12.00	67.88	2.63	
Avicel PH101 (20%A2)	0.00	0.00	0.00
	0.25	3.05	5.64
	0.50	5.53	5.47
	0.75	8.07	6.54
	1.00	10.82	3.74
	2.00	19.28	4.59
	3.00	25.69	3.55
	4.00	31.98	5.02
	5.00	36.03	6.55
	6.00	40.62	5.20
	7.00	44.12	4.25
	8.00	47.89	3.52
	10.00	53.80	2.82
12.00	59.63	3.22	
Avicel PH101 (20%A3)	0.00	0.00	0.00
	0.25	4.72	1.56
	0.50	7.89	1.88
	0.75	11.36	2.15
	1.00	14.28	3.76
	2.00	26.36	2.51
	3.00	30.06	2.54
	4.00	34.96	4.31
	5.00	38.43	2.56
	6.00	43.24	3.25
	7.00	55.20	2.85
	8.00	60.32	2.77
	10.00	65.01	3.62
12.00	59.02	1.78	

*Cumulative % drug Release

TABLE 23. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Avicel PH101[®] as Filler (cont.)

Formulations	Time(hours)	%*	SD
Avicel PH101 (20%A4)	0.00	0.00	0.00
	0.25	1.52	2.52
	0.50	4.48	2.05
	0.75	7.21	3.42
	1.00	10.14	3.93
	2.00	19.23	6.05
	3.00	25.80	6.10
	4.00	32.31	6.57
	5.00	36.33	7.20
	6.00	40.35	1.20
	7.00	46.13	10.90
	8.00	50.55	13.23
	10.00	56.92	16.01
12.00	59.14	4.11	
Avicel PH101 (20%A5)	0.00	0.00	0.00
	0.25	4.28	2.33
	0.50	7.28	2.65
	0.75	10.07	3.21
	1.00	12.36	4.55
	2.00	19.23	2.33
	3.00	24.30	1.54
	4.00	29.04	2.44
	5.00	32.29	1.62
	6.00	35.25	2.45
	7.00	39.17	1.58
	8.00	41.00	1.62
	10.00	44.70	2.45
12.00	48.87	2.31	
Avicel PH101 (20%A6)	0.00	0.00	0.00
	0.25	1.92	4.21
	0.50	3.59	4.88
	0.75	6.16	2.54
	1.00	8.63	5.22
	2.00	17.25	7.21
	3.00	23.04	2.31
	4.00	28.86	3.45
	5.00	33.43	3.38
	6.00	37.45	1.66
	7.00	40.57	3.23
	8.00	43.96	5.29
	10.00	51.27	3.80
12.00	55.84	1.81	

*Cumulative % drug Release

TABLE 24. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Corn Starch as Filler 'cont.'

Formulations	Time(hours)	%*	SD
CORN STARCH (10% C1)	0.00	0.00	0.00
	0.25	9.76	1.83
	0.50	17.83	1.40
	0.75	25.65	1.32
	1.00	31.45	1.61
	2.00	47.78	2.92
	3.00	56.98	2.75
	4.00	63.88	2.53
	5.00	68.83	5.49
	6.00	72.34	3.43
	7.00	76.48	2.85
	8.00	78.64	1.67
	10.00	84.29	2.57
12.00	84.15	5.54	
CORN STARCH (10% C2)	0.00	0.00	0.00
	0.25	10.03	2.27
	0.50	16.44	3.47
	0.75	21.07	3.70
	1.00	25.21	2.98
	2.00	35.04	4.94
	3.00	44.57	5.18
	4.00	49.86	4.04
	5.00	56.18	2.84
	6.00	60.24	1.43
	7.00	64.12	3.97
	8.00	68.58	5.24
	10.00	73.02	4.27
12.00	80.84	3.95	
CORN STARCH. (10% C3)	0.00	0.00	0.00
	0.25	14.76	1.57
	0.50	22.49	0.98
	0.75	29.52	0.26
	1.00	35.35	1.13
	2.00	51.61	3.23
	3.00	67.52	4.55
	4.00	74.43	3.68
	5.00	81.01	2.45
	6.00	82.41	1.31
	7.00	86.96	3.32
	8.00	88.63	4.87
	10.00	98.33	2.56
12.00	97.53	0.76	

*Cumulative % drug Release

TABLE 24. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Corn Starch as Filler (cont.)

Formulations	Time(hours)	%*	SD
CORN STARCH. (10% C4)	0.00	0.00	0.00
	0.25	9.35	2.65
	0.50	16.56	3.27
	0.75	22.52	2.41
	1.00	26.62	5.01
	2.00	39.67	3.06
	3.00	46.59	2.85
	4.00	53.25	4.46
	5.00	58.36	3.65
	6.00	62.94	4.04
	7.00	69.48	4.85
	8.00	69.09	5.63
	10.00	71.72	5.80
12.00	75.06	4.02	
CORN STARCH. (10% C5)	0.00	0.00	0.00
	0.25	4.72	1.83
	0.50	11.19	1.29
	0.75	21.85	4.15
	1.00	30.02	2.04
	2.00	47.76	2.08
	3.00	60.76	3.06
	4.00	69.03	4.53
	5.00	74.29	4.50
	6.00	78.58	1.89
	7.00	80.41	2.91
	8.00	85.65	2.99
	10.00	91.68	2.34
12.00	92.92	2.37	
CORN STARCH. (10% C6)	0.00	0.00	0.00
	0.25	2.61	3.36
	0.50	4.50	2.45
	0.75	7.89	3.20
	1.00	11.14	5.06
	2.00	18.84	6.54
	3.00	33.15	2.41
	4.00	40.17	5.82
	5.00	46.98	4.79
	6.00	52.38	3.54
	7.00	58.94	4.89
	8.00	61.45	3.84
	10.00	69.22	4.80
12.00	72.81	3.47	

*Cumulative % drug Release

TABLE 24. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Corn Starch as Filler (cont.)

Formulations	Time(hours)	%*	SD
CORN STARCH (15% C1)	0.00	0.00	0.00
	0.25	12.53	0.27
	0.50	19.33	1.22
	0.75	21.53	1.52
	1.00	24.01	1.45
	2.00	32.51	2.95
	3.00	38.04	4.48
	4.00	45.17	4.10
	5.00	53.85	3.56
	6.00	58.81	1.06
	7.00	64.06	4.60
	8.00	70.11	4.54
	10.00	79.10	3.19
12.00	85.26	2.06	
CORN STARCH (15% C2)	0.00	0.00	0.00
	0.25	11.14	2.04
	0.50	16.43	2.35
	0.75	17.92	2.31
	1.00	19.62	4.32
	2.00	34.99	4.89
	3.00	41.97	3.51
	4.00	47.94	2.64
	5.00	53.91	3.65
	6.00	56.82	6.08
	7.00	60.92	3.60
	8.00	62.99	4.30
	10.00	66.53	4.32
12.00	69.30	4.25	
CORN STARCH. (15% C3)	0.00	0.00	0.00
	0.25	10.10	1.20
	0.50	21.17	1.04
	0.75	23.69	2.30
	1.00	30.97	3.11
	2.00	48.83	2.53
	3.00	61.99	1.72
	4.00	72.50	3.22
	5.00	75.60	4.79
	6.00	81.26	3.09
	7.00	86.12	2.02
	8.00	89.09	3.73
	10.00	92.61	2.18
12.00	94.22	2.44	

*Cumulative % drug Release

TABLE 24. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Corn Starch as Filler (cont.)

Formulations	Time(hours)	%*	SD
CORN STARCH. (15%C4)	0.00	0.00	0.00
	0.25	5.21	1.56
	0.50	9.70	1.49
	0.75	14.36	3.51
	1.00	19.17	2.75
	2.00	32.97	4.92
	3.00	37.78	5.25
	4.00	41.02	3.65
	5.00	46.30	2.54
	6.00	50.95	1.62
	7.00	53.69	3.36
	8.00	58.77	4.62
	10.00	62.66	5.83
12.00	63.81	3.63	
CORN STARCH. (15%C5)	0.00	0.00	0.00
	0.25	9.34	0.95
	0.50	17.08	3.01
	0.75	22.85	2.92
	1.00	27.00	3.41
	2.00	39.62	8.58
	3.00	46.86	2.40
	4.00	53.24	0.16
	5.00	58.59	2.06
	6.00	63.10	0.46
	7.00	69.08	3.57
	8.00	69.51	3.77
	10.00	73.45	2.92
12.00	78.35	1.99	
CORN STARCH. (15%C6)	0.00	0.00	0.00
	0.25	3.76	2.45
	0.50	8.56	1.74
	0.75	12.80	2.46
	1.00	15.62	1.95
	2.00	24.19	6.93
	3.00	29.32	4.65
	4.00	36.64	5.19
	5.00	36.63	5.57
	6.00	39.34	2.58
	7.00	41.57	6.30
	8.00	43.76	5.64
	10.00	48.96	3.25
12.00	52.89	4.98	

*Cumulative % drug Release

TABLE 24. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Corn Starch as Filler (cont.)

Formulations	Time(hours)	%*	SD
CORN STARCH. (20% C1)	0.00	0.00	0.00
	0.25	14.03	2.86
	0.50	20.15	0.52
	0.75	24.82	4.04
	1.00	27.38	2.63
	2.00	36.78	5.36
	3.00	43.68	5.14
	4.00	49.48	4.63
	5.00	54.78	2.58
	6.00	57.85	3.10
	7.00	62.64	5.15
	8.00	63.57	1.74
	10.00	68.08	4.65
12.00	70.33	3.37	
CORN STARCH. (20% C2)	0.00	0.00	0.00
	0.25	7.13	0.94
	0.50	12.23	0.72
	0.75	15.73	1.47
	1.00	18.14	2.09
	2.00	24.51	1.59
	3.00	29.37	2.42
	4.00	32.78	2.23
	5.00	35.21	2.57
	6.00	38.04	1.38
	7.00	40.49	2.92
	8.00	42.57	1.73
	10.00	46.22	2.07
12.00	49.30	4.46	
CORN STARCH. (20% C3)	0.00	0.00	0.00
	0.25	7.21	1.35
	0.50	10.91	1.47
	0.75	17.17	3.00
	1.00	22.69	2.56
	2.00	31.00	2.11
	3.00	43.68	4.56
	4.00	49.48	2.45
	5.00	54.78	4.56
	6.00	57.58	1.03
	7.00	62.64	2.58
	8.00	63.57	3.58
	10.00	68.08	4.56
12.00	70.32	2.03	


*Cumulative % drug Release

TABLE 24. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Corn Starch as Filler (cont.)

Formulations	Time(hours)	%*	SD
CORN STARCH (20% C4)	0.00	0.00	0.00
	0.25	3.50	2.65
	0.50	9.15	3.05
	0.75	12.98	4.20
	1.00	15.99	5.93
	2.00	24.27	6.24
	3.00	29.86	3.54
	4.00	33.82	2.47
	5.00	37.12	3.56
	6.00	40.19	1.47
	7.00	43.28	4.60
	8.00	44.88	3.34
	10.00	49.26	6.01
12.00	54.02	5.52	
CORN STARCH. (20% C5)	0.00	0.00	0.00
	0.25	3.44	1.00
	0.50	10.74	2.09
	0.75	18.12	2.48
	1.00	23.42	4.66
	2.00	38.16	4.72
	3.00	47.65	3.80
	4.00	55.09	2.00
	5.00	60.28	2.37
	6.00	59.89	2.63
	7.00	62.40	5.82
	8.00	65.84	3.54
	10.00	70.69	4.75
12.00	74.22	0.59	
CORN STARCH. (20% C6)	0.00	0.00	0.00
	0.25	2.08	2.72
	0.50	3.11	3.23
	0.75	4.52	1.89
	1.00	6.04	2.39
	2.00	11.91	4.73
	3.00	17.45	5.68
	4.00	22.96	8.67
	5.00	27.64	5.59
	6.00	31.71	1.60
	7.00	36.09	5.31
	8.00	39.85	3.77
	10.00	46.90	3.63
12.00	51.67	2.67	

*Cumulative % drug Release

TABLE 25 Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Emcompress^R as Filler (cont.)



Formulations	Time(hours)	%*	SD
EMCOMPRESS (10%E1)	0.00	0.00	0.00
	0.25	5.71	1.23
	0.50	10.20	3.51
	0.75	14.31	4.75
	1.00	17.88	5.10
	2.00	28.73	2.55
	3.00	37.44	6.68
	4.00	44.62	3.84
	5.00	50.78	4.36
	6.00	55.66	2.92
	7.00	57.98	4.68
	8.00	61.56	2.56
	10.00	67.50	4.36
12.00	72.47	3.49	
EMCOMPRESS (10%E2)	0.00	0.00	0.00
	0.25	3.25	7.27
	0.50	6.75	8.47
	0.75	9.25	10.73
	1.00	10.37	8.29
	2.00	22.02	4.94
	3.00	30.65	5.18
	4.00	37.54	4.04
	5.00	42.57	3.57
	6.00	47.29	2.74
	7.00	50.98	6.92
	8.00	53.55	5.24
	10.00	58.97	6.27
12.00	62.82	4.03	
EMCOMPRESS (10%E3)	0.00	0.00	0.00
	0.25	6.70	1.41
	0.50	11.42	1.38
	0.75	15.91	1.33
	1.00	19.18	1.69
	2.00	28.94	1.79
	3.00	38.51	3.07
	4.00	43.56	3.76
	5.00	47.03	2.56
	6.00	52.09	6.17
	7.00	56.88	4.70
	8.00	60.64	5.60
	10.00	66.47	5.38
12.00	66.94	5.50	

*Cumulative % drug Release

TABLE 25 Amount Percent of Theophylline Release from Tablet
Prepared from Coated Granules Containing Emcompress[®]
as Filler (cont.)

Formulations	Time(hours)	%*	SD
EMCOMPRESS (10%E4)	0.00	0.00	0.00
	0.25	6.96	5.80
	0.50	11.53	4.30
	0.75	15.45	6.70
	1.00	18.98	5.95
	2.00	29.97	8.69
	3.00	37.32	5.20
	4.00	42.04	4.60
	5.00	43.68	3.70
	6.00	46.54	4.85
	7.00	49.79	5.20
	8.00	49.46	6.70
	10.00	52.43	5.70
12.00	52.73	3.14	
EMCOMPRESS. (10%E5)	0.00	0.00	0.00
	0.25	2.84	1.69
	0.50	7.07	3.84
	0.75	12.37	2.64
	1.00	15.22	5.15
	2.00	28.36	1.65
	3.00	38.32	1.21
	4.00	44.75	4.22
	5.00	51.68	3.75
	6.00	56.20	2.05
	7.00	60.48	2.12
	8.00	63.85	1.32
	10.00	68.31	3.72
12.00	68.07	3.90	
EMCOMPRESS (10%E6)	0.00	0.00	0.00
	0.25	2.30	1.06
	0.50	4.65	1.72
	0.75	6.05	1.60
	1.00	8.05	2.17
	2.00	14.75	3.80
	3.00	19.01	2.82
	4.00	22.40	3.35
	5.00	25.82	4.35
	6.00	28.59	1.15
	7.00	31.62	2.48
	8.00	34.29	2.48
	10.00	39.52	3.79
12.00	43.64	2.00	

*Cumulative % drug Release

TABLE 25 Amount Percent of Theophylline Release from Tablet
Prepared from Coated Granules Containing Emcompress^P
as Filler (cont.)

Formulations	Time(hours)	%*	SD
EMCOMPRESS (15%E1)	0.00	0.00	0.00
	0.25	6.28	0.84
	0.50	11.23	1.00
	0.75	14.42	1.34
	1.00	17.67	2.04
	2.00	26.83	3.95
	3.00	34.89	3.48
	4.00	40.25	3.88
	5.00	41.09	4.81
	6.00	44.33	2.65
	7.00	46.95	5.20
	8.00	47.16	4.54
	10.00	50.70	5.37
12.00	51.95	2.91	
EMCOMPRESS. (15%E2)	0.00	0.00	0.00
	0.25	2.14	6.70
	0.50	3.91	7.30
	0.75	5.80	5.88
	1.00	7.34	4.50
	2.00	13.57	6.80
	3.00	18.14	6.05
	4.00	22.23	5.13
	5.00	25.49	3.26
	6.00	28.47	4.37
	7.00	31.43	6.23
	8.00	34.78	3.03
	10.00	38.38	6.50
12.00	42.04	3.68	
EMCOMPRESS. (15%E3)	0.00	0.00	0.00
	0.25	5.39	2.02
	0.50	10.08	2.42
	0.75	14.61	2.20
	1.00	18.44	2.89
	2.00	29.65	2.86
	3.00	36.56	1.91
	4.00	41.81	1.18
	5.00	43.91	2.84
	6.00	47.75	3.47
	7.00	49.69	3.40
	8.00	51.09	4.95
	10.00	52.88	2.05
12.00	55.46	4.04	

*Cumulative % drug Release

TABLE 25 Amount Percent of Theophylline Release from Tablet
 Prepared from Coated Granules Containing Emcompress[®]
 as Filler (cont.)

Formulations	Time(hours)	%*	SD
EMCOMPRESS. (15%E4)	0.00	0.00	0.00
	0.25	2.11	1.23
	0.50	3.21	1.09
	0.75	4.29	1.19
	1.00	5.52	1.61
	2.00	9.74	2.13
	3.00	13.07	3.42
	4.00	15.35	2.89
	5.00	17.76	4.17
	6.00	20.18	2.20
	7.00	22.55	3.93
	8.00	24.59	4.58
	10.00	29.09	2.99
12.00	32.48	5.89	
EMCOMPRESS. (15%E5)	0.00	0.00	0.00
	0.25	5.10	1.97
	0.50	9.81	2.62
	0.75	14.37	2.40
	1.00	17.93	2.97
	2.00	29.27	2.89
	3.00	36.11	3.10
	4.00	40.54	5.20
	5.00	42.40	4.84
	6.00	46.49	4.28
	7.00	48.32	3.40
	8.00	49.05	4.95
	10.00	50.25	2.05
12.00	53.67	4.22	
EMCOMPRESS (15%E6)	0.00	0.00	0.00
	0.25	1.89	0.13
	0.50	2.70	0.57
	0.75	3.97	1.20
	1.00	5.45	1.22
	2.00	10.31	0.87
	3.00	12.77	1.54
	4.00	14.42	4.06
	5.00	16.66	2.46
	6.00	18.33	0.84
	7.00	20.06	2.52
	8.00	22.07	2.71
	10.00	25.12	2.43
12.00	28.09	0.50	

*Cumulative % drug Release

TABLE 25 Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Emcompress^R as Filler (cont.)

Formulations	Time(hours)	%*	SD
EMCOMPRESS. (20%E1)	0.00	0.00	0.00
	0.25	3.55	0.50
	0.50	6.26	0.92
	0.75	8.59	2.50
	1.00	10.56	2.40
	2.00	17.08	4.13
	3.00	21.87	2.97
	4.00	25.33	1.80
	5.00	28.43	1.18
	6.00	29.30	1.95
	7.00	33.69	0.02
	8.00	35.60	0.15
	10.00	38.87	1.32
12.00	40.35	0.69	
EMCOMPRESS. (20%E2)	0.00	0.00	0.00
	0.25	1.92	6.30
	0.50	3.68	7.70
	0.75	5.26	5.11
	1.00	6.92	6.30
	2.00	11.97	3.83
	3.00	14.49	5.06
	4.00	16.38	5.11
	5.00	17.15	3.06
	6.00	20.84	3.08
	7.00	22.78	4.50
	8.00	24.20	3.03
	10.00	27.17	4.40
12.00	30.59	4.81	
EMCOMPRESS. (20%E3)	0.00	0.00	0.00
	0.25	3.70	0.51
	0.50	6.67	0.27
	0.75	9.30	0.00
	1.00	12.06	0.60
	2.00	19.47	0.26
	3.00	24.25	2.68
	4.00	28.50	3.76
	5.00	34.05	0.27
	6.00	36.66	0.45
	7.00	40.60	2.24
	8.00	43.87	5.73
	10.00	45.28	2.75
12.00	50.07	1.38	

*Cumulative % drug Release

TABLE 25 Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Emcompress[®] as Filler

Formulations	Time(hours)	%*	SD
EMCOMPRESS. (20%E4)	0.00	0.00	0.00
	0.25	2.02	3.50
	0.50	3.77	4.20
	0.75	5.57	3.60
	1.00	5.57	4.30
	2.00	6.93	2.13
	3.00	10.93	2.45
	4.00	13.45	4.27
	5.00	15.39	2.85
	6.00	16.51	2.29
	7.00	17.83	3.70
	8.00	20.47	3.38
	10.00	23.55	6.70
12.00	25.90	3.35	
EMCOMPRESS. (20%E5)	0.00	0.00	0.00
	0.25	3.87	2.10
	0.50	6.76	1.70
	0.75	9.30	1.30
	1.00	12.26	1.60
	2.00	19.38	2.60
	3.00	23.36	2.68
	4.00	27.25	3.76
	5.00	29.84	4.27
	6.00	32.20	0.45
	7.00	35.31	2.24
	8.00	36.45	3.75
	10.00	39.45	2.25
12.00	42.75	1.38	
EMCOMPRESS (20%E6)	0.00	0.00	0.00
	0.25	1.29	0.50
	0.50	2.67	0.71
	0.75	4.15	0.87
	1.00	5.47	1.00
	2.00	9.80	1.41
	3.00	12.55	1.73
	4.00	14.66	2.00
	5.00	16.66	2.24
	6.00	18.95	2.45
	7.00	20.70	2.65
	8.00	22.68	2.83
	10.00	25.90	3.16
12.00	28.99	3.46	

*Cumulative % drug Release

TABLE 26. Amount Percent of Theophylline Release from Tablet
Prepared from Coated Granules Containing Lactose
as Filler (cont.)

Formulations	Time(hours)	%*	SD
LACTOSE (10%L1)	0.00	0.00	0.00
	0.25	8.14	2.40
	0.50	12.95	3.60
	0.75	16.23	3.45
	1.00	19.43	3.68
	2.00	29.92	4.34
	3.00	40.90	0.99
	4.00	48.28	1.79
	5.00	55.77	0.67
	6.00	58.99	0.65
	7.00	61.69	2.88
	8.00	63.79	1.59
	10.00	68.55	0.98
12.00	72.93	0.66	
LACTOSE (10%L2)	0.00	0.00	0.00
	0.25	2.94	0.69
	0.50	6.27	2.48
	0.75	10.35	3.92
	1.00	14.35	5.49
	2.00	28.02	5.92
	3.00	38.75	4.44
	4.00	47.76	3.04
	5.00	55.06	2.53
	6.00	61.41	1.31
	7.00	67.09	4.12
	8.00	71.31	5.23
	10.00	76.90	7.01
12.00	82.43	3.36	
LACTOSE (10%L3)	0.00	0.00	0.00
	0.25	9.00	0.77
	0.50	15.59	1.10
	0.75	21.27	1.97
	1.00	25.12	2.36
	2.00	37.52	1.98
	3.00	54.09	4.62
	4.00	63.03	6.33
	5.00	69.13	2.18
	6.00	72.40	3.63
	7.00	74.17	4.05
	8.00	78.83	3.22
	10.00	82.49	5.02
12.00	99.00	1.02	

*Cumulative % drug Release

TABLE 26. Amount Percent of Theophylline Release from Tablet Prepared from Coated Granules Containing Lactose as Filler (cont.)

Formulations	Time(hours)	%*	SD
LACTOSE (10%L4)	0.00	0.00	0.00
	0.25	2.77	1.00
	0.50	5.42	1.46
	0.75	8.13	2.11
	1.00	10.78	2.73
	2.00	19.29	4.35
	3.00	24.81	8.37
	4.00	31.22	3.77
	5.00	36.21	2.14
	6.00	43.20	4.59
	7.00	49.10	3.82
	8.00	50.79	8.82
	10.00	60.11	6.62
12.00	66.18	7.11	
LACTOSE (10%L5)	0.00	0.00	0.00
	0.25	10.11	0.70
	0.50	10.11	1.46
	0.75	14.49	2.26
	1.00	17.36	2.87
	2.00	30.05	0.12
	3.00	40.44	2.04
	4.00	44.75	3.27
	5.00	49.98	2.76
	6.00	57.63	5.07
	7.00	57.67	3.79
	8.00	59.67	2.61
	10.00	62.31	2.52
12.00	68.77	4.82	
LACTOSE (10%L6)	0.00	0.00	0.00
	0.25	1.63	4.11
	0.50	3.65	2.72
	0.75	5.85	2.44
	1.00	7.90	3.04
	2.00	15.10	4.51
	3.00	21.97	7.36
	4.00	27.35	8.68
	5.00	32.81	7.10
	6.00	37.82	4.58
	7.00	42.50	4.32
	8.00	46.87	6.81
	10.00	55.03	7.48
12.00	62.30	3.15	

*Cumulative % drug Release

TABLE 26. Amount Percent of Theophylline Release from Tablet
Prepared from Coated Granules Containing Lactose
as Filler (cont.)

Formulations	Time(hours)	%*	SD: *
LACTOSE (15%L1)	0.00	0.00	0.00
	0.25	5.45	0.03
	0.50	9.07	1.97
	0.75	13.61	3.32
	1.00	17.65	3.04
	2.00	29.44	5.12
	3.00	41.65	2.95
	4.00	49.22	2.81
	5.00	53.83	4.63
	6.00	50.42	3.04
	7.00	53.21	5.84
	8.00	64.01	4.12
	10.00	68.65	3.75
12.00	74.64	0.65	
LACTOSE (15%L2)	0.00	0.00	0.00
	0.25	1.68	0.48
	0.50	2.98	0.09
	0.75	4.55	0.15
	1.00	6.31	0.90
	2.00	12.58	3.45
	3.00	17.76	5.99
	4.00	23.66	8.69
	5.00	35.19	8.22
	6.00	39.05	2.12
	7.00	41.95	4.74
	8.00	45.57	7.22
	10.00	56.31	8.25
12.00	65.11	4.35	
LACTOSE (15%L3)	0.00	0.00	0.00
	0.25	2.90	0.85
	0.50	6.67	1.78
	0.75	11.35	2.64
	1.00	15.52	3.21
	2.00	27.63	4.99
	3.00	39.09	4.85
	4.00	47.66	3.95
	5.00	54.57	4.40
	6.00	59.59	3.74
	7.00	65.25	3.26
	8.00	69.48	3.38
	10.00	77.47	4.34
12.00	81.52	4.42	

*Cumulative % drug Release

TABLE 26. Amount Percent of Theophylline Release from Tablet
Prepared from Coated Granules Containing Lactose
as Filler (cont.)

Formulations	Time(hours)	%*	SD
LACTOSE (15%L4)	0.00	0.00	0.00
	0.25	1.76	2.30
	0.50	3.28	3.12
	0.75	5.05	3.32
	1.00	6.59	3.04
	2.00	12.83	5.12
	3.00	17.86	2.95
	4.00	21.85	6.81
	5.00	26.32	7.63
	6.00	27.57	4.37
	7.00	33.23	5.84
	8.00	34.72	9.12
	10.00	42.65	5.70
12.00	47.06	3.56	
LACTOSE (15%L5)	0.00	0.00	0.00
	0.25	2.28	0.32
	0.50	5.85	1.47
	0.75	11.66	2.19
	1.00	15.88	2.37
	2.00	28.39	1.72
	3.00	39.96	1.74
	4.00	48.63	1.97
	5.00	55.48	2.94
	6.00	60.33	3.03
	7.00	65.31	2.85
	8.00	69.96	2.62
	10.00	77.13	2.96
12.00	83.56	3.51	
LACTOSE (15%L6)	0.00	0.00	0.00
	0.25	1.48	3.40
	0.50	2.30	5.20
	0.75	3.52	6.20
	1.00	4.77	4.63
	2.00	8.66	5.56
	3.00	12.51	6.56
	4.00	16.06	8.33
	5.00	18.83	7.47
	6.00	21.99	3.59
	7.00	24.71	8.31
	8.00	27.65	3.93
	10.00	32.70	4.74
12.00	36.18	4.75	

*Cumulative drug Release

TABLE 26. Amount Percent of Theophylline Release from Tablet
Prepared from Coated Granules Containing Lactose
as Filler (cont.)

Formulations	Time(hours)	%*	SD
LACTOSE (20%L1)	0.00	0.00	0.00
	0.25	3.90	0.97
	0.50	7.05	0.23
	0.75	9.95	1.16
	1.00	12.65	1.07
	2.00	21.42	2.00
	3.00	27.73	1.69
	4.00	34.33	4.56
	5.00	38.54	3.13
	6.00	42.23	0.80
	7.00	45.83	3.94
	8.00	49.85	5.14
	10.00	57.39	1.12
12.00	59.40	0.43	
LACTOSE (20%L2)	0.00	0.00	0.00
	0.25	0.87	2.22
	0.50	1.96	3.72
	0.75	3.44	2.13
	1.00	5.49	1.73
	2.00	13.19	3.65
	3.00	19.27	5.43
	4.00	25.37	6.37
	5.00	30.82	4.78
	6.00	36.26	3.81
	7.00	40.85	8.12
	8.00	46.02	4.42
	10.00	53.15	4.90
12.00	58.76	5.47	
LACTOSE (20%L3)	0.00	0.00	0.00
	0.25	2.25	1.31
	0.50	4.18	1.49
	0.75	6.02	2.41
	1.00	7.64	1.21
	2.00	13.08	4.10
	3.00	17.91	4.94
	4.00	22.11	3.62
	5.00	25.96	2.87
	6.00	29.27	0.04
	7.00	31.58	3.34
	8.00	34.04	2.03
	10.00	39.46	3.17
12.00	45.29	0.67	

*Cumulative % drug Release

TABLE 26. Amount Percent of Theophylline Release from Tablet
Prepared from Coated Granules Containing Lactose
as Filler (cont.)

Formulations	Time(hours)	%*	SD
LACTOSE (20%L4)	0.00	0.00	0.00
	0.25	1.44	3.22
	0.50	2.82	2.14
	0.75	3.98	1.23
	1.00	5.19	1.73
	2.00	10.15	3.65
	3.00	14.65	5.43
	4.00	19.05	6.37
	5.00	23.31	8.74
	6.00	26.18	0.72
	7.00	29.90	8.12
	8.00	33.06	4.20
	10.00	38.26	5.90
12.00	47.47	6.92	
LACTOSE (20%L5)	0.00	0.00	0.00
	0.25	2.54	1.00
	0.50	5.06	2.05
	0.75	7.47	2.44
	1.00	9.38	2.79
	2.00	14.86	6.93
	3.00	20.84	1.83
	4.00	25.58	1.55
	5.00	30.46	1.75
	6.00	34.17	2.24
	7.00	36.93	1.37
	8.00	40.30	1.98
	10.00	45.29	1.13
12.00	48.11	1.55	
LACTOSE (20%L6)	0.00	0.00	0.00
	0.25	0.94	1.44
	0.50	1.51	3.39
	0.75	2.58	2.69
	1.00	3.66	4.93
	2.00	7.95	3.70
	3.00	11.95	4.31
	4.00	15.57	5.13
	5.00	19.26	2.16
	6.00	22.58	1.02
	7.00	26.08	3.68
	8.00	30.73	4.87
	10.00	35.74	4.24
12.00	41.16	2.35	

*Cumulative % drug Release

TABLE 27. Amount Percent of Theophylline Release from Combined
Different Coated Granules Containing Avicel PH101^R
as Filler (10%+20% , 50:50)

Formulations	Time(hours)	%*	SD
Avicel PH101R	0.00	0.00	0.00
10%+20%	0.25	6.47	1.06
50:50	0.50	11.87	3.78
	0.75	22.09	5.54
	1.00	26.94	7.59
	2.00	39.26	4.70
	3.00	50.51	6.69
	4.00	56.95	12.03
	5.00	62.82	7.37
	6.00	66.22	5.96
	7.00	73.25	5.8
	8.00	72.44	8.79
	10.00	76.21	10.22
	12.00	75.18	5.65

*Cumulative % drug Release

TABLE 28. Amount Percent of Theophylline Release from Combined Different Coated Granules Containing Avicel PH101^R as Filler (10%+20% , 70:30)

Formulations	Time(hours)	%*	SD
Avicel PH101 ^R	0.00	0.00	0.00
10%+20%	0.25	7.07	1.45
70:30	0.50	14.85	4.75
	0.75	22.19	8.46
	1.00	28.59	11.46
	2.00	47.93	6.34
	3.00	59.17	9.94
	4.00	66.49	12.17
	5.00	71.92	10.6
	6.00	75.26	8.50
	7.00	77.22	8.33
	8.00	81.92	7.55
	10.00	83.76	12.12
	12.00	86.86	7.39

*Cumulative % drug Release

TABLE 30. Amount Percent of Theophylline Release from commercial Product, Neulin[®] 250 mg, in PH Chang Method

Product	Time(hours)	%	SD
NeulinR	0.00	0.00	0.00
	0.25	6.57	0.55
	0.50	13.37	0.36
	0.75	17.00	0.52
	1.00	19.83	0.66
	2.00	27.04	1.75
	3.00	32.79	1.36
	4.00	39.95	1.54
	5.00	46.44	1.96
	6.00	51.66	2.57
	7.00	55.22	2.12
	8.00	59.20	1.58
	10.00	67.24	0.76
12.00	74.23	0.59	

*Cumulative % drug Release

TABLE 31. Amount Percent of Theophylline Release from Three
Batch of Coated Granules

BATCH I	Time(hours)	%*	SD
	0.00	0.00	0.00
	0.25	1.75	2.54
	0.50	2.72	2.14
	0.75	4.03	2.63
	1.00	5.49	3.20
	2.00	11.52	2.40
	3.00	19.72	1.56
	4.00	32.24	1.78
	5.00	41.05	2.90
	6.00	48.22	2.61
	7.00	53.29	2.41
	8.00	55.11	3.24
	10.00	61.57	2.41
	12.00	65.83	2.31
BATCH II	0.00	0.00	0.00
	0.25	2.56	1.56
	0.50	3.85	2.03
	0.75	4.02	3.21
	1.00	5.51	2.54
	2.00	14.23	3.66
	3.00	25.22	3.50
	4.00	36.42	2.56
	5.00	45.68	2.88
	6.00	50.33	2.47
	7.00	54.00	3.55
	8.00	57.33	2.36
	10.00	65.45	2.54
	12.00	70.02	2.88
BATCH III	0.00	0.00	0.00
	0.25	1.67	1.35
	0.50	2.05	1.85
	0.75	3.99	1.78
	1.00	6.21	2.66
	2.00	12.33	3.54
	3.00	24.23	3.77
	4.00	32.45	4.01
	5.00	42.35	4.22
	6.00	50.22	3.65
	7.00	53.21	3.21
	8.00	58.21	3.59
	10.00	60.25	2.66
	12.00	67.31	2.78

*Cumulative % drug Release

TABLE 32. Amount Percent of Theophylline from Tablet prepared from Reproduced Coated Granules

	Time(hours)	%*	SD
BATCH I	0.00	0.00	0.00
	0.25	2.28	0.32
	0.50	5.85	1.47
	0.75	11.66	2.19
	1.00	15.88	2.37
	2.00	28.39	1.72
	3.00	39.96	1.74
	4.00	48.63	1.97
	5.00	55.48	2.94
	6.00	60.33	3.03
	7.00	65.31	2.85
	8.00	69.96	2.62
	10.00	77.13	2.96
12.00	83.56	3.51	
BATCH II	0.00	0.00	0.00
	0.25	2.26	2.54
	0.50	5.23	2.95
	0.75	10.62	3.36
	1.00	15.92	4.25
	2.00	29.78	4.50
	3.00	42.21	4.21
	4.00	51.41	3.25
	5.00	59.44	3.68
	6.00	63.95	3.40
	7.00	68.96	3.33
	8.00	72.75	2.56
	10.00	80.98	2.89
12.00	88.52	4.21	
BATCH III	0.00	0.00	0.00
	0.25	4.57	1.95
	0.50	9.06	1.58
	0.75	13.66	2.61
	1.00	17.80	3.55
	2.00	29.53	2.69
	3.00	39.12	2.67
	4.00	46.40	2.55
	5.00	51.24	3.21
	6.00	57.11	4.10
	7.00	63.37	4.88
	8.00	64.41	3.64
	10.00	70.38	3.55
12.00	73.49	2.56	

*Cumulative % drug Release

Table 33 Diffusional exponent and mechanism of diffusional release from various non-swellable controlled release systems.

Diffusional Exponent, n			Drug Release Mechanism
Thin Film	Cylindrical Sample	Spherical Sample	
0.5	0.45	0.43	Fickian Diffusion
$0.5 < n < 1.00$	$0.45 < n < 1.00$	$0.43 < n < 1.00$	Anomalous (non-Fickian) Transport
1.0	1.0	1.0	Zero-Order Release

Biography

Miss Sudarat Eaimtrakarm was born on February 29, 1968. She got her degree in Bachelor of Science in Pharmacy with second honors in 1990 from Faculty of Pharmaceutical Science, Khonkaen University, Khonkaen, Thailand.

