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## APPENDIX

## APPENDIX A1 STABILITY DATA OF DS AT 2 WEEKS

	CONCENTRATION (mcg/mL)				MEAN	S.D.	
pH 5-T35	43.0640	44.4371	43.3529	43.5696	43.6059	0.5123	
	-T45	41.5089	42.4881	41.2948	41.3667	0.4816	
	-T55	31.4474	31.2666	31.2802		31.3314	0.0822
	-T65	28.2062	28.1303	28.4110	28.2371	28.2954	0.1248
		28.3576	28.2350	28.5446	28.2417		
pH 6-T35	48.9732	48.6565	48.2086	48.1697	48.5303	0.3028	
	48.6438						
	-T45	49.1598	48.5101	48.5664	48.2851	48.6303	0.3233
	-T55	46.8735	46.9718	47.0616	47.0417	46.9872	0.0736
	-T65	46.8604	46.9686	47.3243	47.2765	47.1074	0.1974
pH 7-T35	52.4268	51.9840	52.2629	52.2625	52.2340	0.1591	
	-T45	52.2359	52.5035	52.3963	52.3818	52.3794	0.0952
	-T55	51.3873	51.3018	50.9885	50.9985	51.1690	0.1781
	-T65	50.3965	50.4066	50.5648	50.6148	50.4956	0.0958
pH 8-T35	50.3039	50.4010	50.1316	50.4624	50.3247	0.1250	
	-T45	49.8708	50.0031	50.3647	50.0924	50.0828	0.1809
	-T55	48.7535	48.7551	48.8101	49.0234	48.8355	0.1108
	-T65	48.7427	48.6610	48.6266		48.6768	0.0487
pH 9-T35	49.2044	48.9230	49.1845		49.1040	0.1282	
	-T45	49.5481	49.5184	49.5634	49.0869	49.4292	0.1982
	-T55	48.6214	48.9270	48.5591	48.6782	48.6964	0.1396
	-T65	46.8201	47.1975	46.7297	46.9449	46.9231	0.1759

## APPENDIX A2 PERCENT OF DS REMAINED AT 2 WEEKS

	PERCENT				MEAN	S.D.
pH 5-T35	86.13	88.87	86.71	87.14	87.21	1.0247
-T45	83.02	84.98	82.59	82.73	83.33	0.9633
-T55	62.89	62.53	62.56		62.66	0.1644
-T65	56.41	56.26	56.82	56.47	56.59	0.2495
	56.72	56.47	57.09	56.48		
pH 6-T35	97.95	97.31	96.42	96.34	97.06	0.6056
	97.29					
-T45	98.32	97.02	97.13	96.57	97.26	0.6466
-T55	93.75	93.94	94.12	94.08	93.97	0.1472
-T65	93.72	93.94	94.65	94.55	94.21	0.3949
pH 7-T35	104.85	103.97	104.53	104.52	104.47	0.3183
-T45	104.47	105.01	104.79	104.76	104.76	0.1905
-T55	102.77	102.60	101.98	102.00	102.34	0.3562
-T65	100.79	100.81	101.13	101.23	100.99	0.1916
pH 8-T35	100.61	100.80	100.26	100.92	100.65	0.2500
-T45	99.74	100.01	100.73	100.18	100.17	0.3617
-T55	97.51	97.51	97.62	98.05	97.67	0.2217
-T65	97.49	97.32	97.25		97.35	0.0973
pH 9-T35	98.41	97.85	98.37		98.21	0.2564
-T45	99.10	99.04	99.13	98.17	98.86	0.3965
-T55	97.24	97.85	97.12	97.36	97.39	0.2793
-T65	93.64	94.40	93.46	93.89	93.85	0.3518

## APPENDIX A3 STABILITY DATA OF DS AT 1 MONTHS

		CONCENTRATION (mcg/mL)				MEAN	S.D.
pH 5-	T35	38.3265	38.1755	38.1396	38.3273	38.3359	0.2024
		38.7106					
	-T45	29.2650	29.3901	29.8698	29.1577	29.3826	0.2549
		29.2307					
	-T55	4.3994	4.4335	4.3798	4.1939	4.3516	0.0931
	-T65	4.5126	4.4850	4.3990	4.4888	4.4713	0.0431
pH 6-	T35	47.5846	47.6990	47.7053	47.5561	47.6363	0.0667
	-T45	46.7154	46.5737	46.7732	46.4360	46.6246	0.1308
	-T55	42.1211	41.8335	41.9572		41.9706	0.1178
	-T65	41.4544	41.5070	41.2995	41.2276	41.3721	0.1131
	pH 7-	T35	50.8551	50.9995	50.7726	50.7257	50.8382
-T45		50.3629	49.8851	50.1314	49.8603	50.0599	0.2045
-T55		44.8367	45.0118	44.9933	45.1702	45.0030	0.1181
-T65		44.8300	44.8439	44.7468	44.8949	44.8289	0.0532
pH 8-		T35	48.7265	48.7556	48.6675	48.8288	48.7446
	-T45	47.8607	47.7803	47.7757	47.9493	47.8415	0.0708
	-T55	44.1529	43.7782	43.9318	44.1525	44.0039	0.1584
	-T65	43.5587	43.8583	43.6246	43.4224	43.6160	0.1577
	pH 9-	T35	47.8181	48.0888	48.0065	47.9295	47.9607
-T45		47.4753	47.4853	47.8511	47.6457	47.6144	0.1525
-T55		44.5412	44.2961	44.6835	44.6287	44.5374	0.1483
-T65		43.6233	43.2667	43.7657	44.0380	43.6734	0.2781

## APPENDIX A4 PERCENT OF DS REMAINED AT 1 MONTHS

	PERCENT				MEAN	S. D.
pH 5-T35	76.65	76.35	76.28	76.65	76.67	0.4048
	77.42					
-T45	58.53	58.78	59.74	58.32	58.77	0.5098
	58.46					
-T55	8.80	8.87	8.76	8.39	8.70	0.1862
-T65	9.03	8.97	8.80	8.98	8.94	0.0862
pH 6-T35	95.17	95.40	95.41	95.11	95.27	0.1334
-T45	93.43	93.15	93.55	92.87	93.25	0.2617
-T55	84.24	83.67	83.91		83.94	0.2356
-T65	82.91	83.01	82.60	82.46	82.74	0.2261
pH 7-T35	101.71	102.00	101.55	101.45	101.68	0.2080
-T45	100.73	99.77	100.26	99.72	100.12	0.4090
-T55	89.67	90.02	89.99	90.34	90.01	0.2362
-T65	89.66	89.69	89.49	89.79	89.66	0.1064
pH 8-T35	97.45	97.51	97.33	97.66	97.49	0.1161
-T45	95.72	95.56	95.55	95.90	95.68	0.1417
-T55	88.31	87.56	87.86	88.31	88.01	0.3169
-T65	87.12	87.72	87.25	86.84	87.23	0.3155
pH 9-T35	95.64	96.18	96.01	95.86	95.92	0.1995
-T45	94.95	94.97	95.70	95.29	95.23	0.3050
-T55	89.08	88.59	89.37	89.26	89.07	0.2965
-T65	87.25	86.53	87.53	88.08	87.35	0.5562

## APPENDIX A5 STABILITY DATA OF DS AT 2 MONTHS

		CONCENTRATION (mcg/mL)				MEAN	S.D.
pH 5-	T35	37.2839	36.8256	36.7904	36.5801	36.8700	0.2567
	T45	23.6264	23.9305	23.8766	24.5829	24.0041	0.3533
	T55	2.8030	2.7767	2.7585	2.7028	2.7602	0.0368
	T65	2.5627	2.9272	2.6143	2.5927	2.6743	0.1472
pH 6-	T35	48.4878	48.3205	48.9051	48.3180	48.5079	0.2395
	T45	46.6886	46.6989	47.0385	46.6931	46.7798	0.1494
	T55	38.8981	38.7785	38.8304	38.6434	38.7876	0.0935
	T65	39.1247	38.9627	39.3599	39.2001	39.1619	0.1430
pH 7-	T35	52.2184	52.0632	51.9874	52.2403	52.1273	0.1058
	T45	50.8394	50.9535	50.8686	50.7974	50.8647	0.0572
	T55	42.3608	42.2218	42.3411	42.2895	42.3033	0.0538
	T65	42.0381	42.0835	41.7801	41.8540	41.9389	0.1257
pH 8-	T35	49.0877	49.1397	49.8952	49.9363	49.5147	0.4017
	T45	48.4977	48.6985	48.6956	48.6816	48.6434	0.0843
	T55	41.6603	41.4327	41.5211	41.7800	41.5985	0.1325
	T65	41.4281	41.5565	41.4588	41.5701	41.5034	0.0611
pH 9-	T35	48.1957	48.4026	48.9926	48.3868	48.4944	0.2989
	T45	48.3663	48.4255	48.2395	48.4458	48.3693	0.0804
	T55	40.9154	41.5529	41.7820	41.3437	41.3985	0.3191
	T65	40.5691	40.8103	40.8736	40.9831	40.8090	0.1517



## APPENDIX A6 PERCENT OF DS REMAINED AT 2 MONTHS

	PERCENT				MEAN	S.D.
pH 5-T35	74.57	73.65	73.58	73.16	73.74	0.5135
-T45	47.25	47.86	47.75	49.17	48.01	0.7067
-T55	5.61	5.55	5.52	5.41	5.52	0.0735
-T65	5.13	5.85	5.23	5.19	5.35	0.2944
pH 6-T35	96.98	96.64	97.81	96.64	97.02	0.4789
-T45	93.38	93.40	94.08	93.39	93.56	0.2988
-T55	77.80	77.56	77.66	77.29	77.58	0.1869
-T65	78.25	77.93	78.72	78.40	78.32	0.2859
pH 7-T35	104.44	104.13	103.97	104.48	104.25	0.2115
-T45	101.68	101.91	101.74	101.59	101.73	0.1144
-T55	84.72	84.44	84.68	84.58	84.61	0.1076
-T65	84.08	84.17	83.56	83.71	83.88	0.2513
pH 8-T35	98.18	98.28	99.79	99.87	99.03	0.8034
-T45	97.00	97.40	97.39	97.36	97.29	0.1686
-T55	83.32	82.87	83.04	83.56	83.20	0.2650
-T65	82.86	83.11	82.92	83.14	83.01	0.1222
pH 9-T35	96.39	96.81	97.99	96.77	96.99	0.5978
-T45	96.73	96.85	96.48	96.89	96.74	0.1608
-T55	81.83	83.11	83.56	82.69	82.80	0.6382
-T65	81.14	81.62	81.75	81.97	81.62	0.3034

## APPENDIX A7 STABILITY DATA OF DS AT 3 MONTHS

		CONCENTRATION (mcg/mL)				MEAN	S.D.
pH 5-	T35	32.1311	31.9979	32.2005		32.1099	0.0841
	T45	17.9822	16.6614	17.6921	17.8007	17.5341	0.5144
	T55	1.2258	0.9783	0.5737	0.5406	0.8296	0.2864
	T65	0.7378	0.5964	0.2692	0.6872	0.5726	0.1824
pH 6-	T35	47.6306	48.1658	49.8867	49.8151	48.8745	0.9948
	T45	45.6334	45.7803	47.3599	47.3537	46.5318	0.8266
	T55	34.0779	34.5581	35.6511	35.0549	34.8355	0.5840
	T65	34.3837	34.6361	35.5291	35.4393	34.9970	0.4963
pH 7-	T35	51.3100	51.4893	52.9409	52.7552	52.1238	0.7299
	T45	49.3315	49.6022	50.3084		49.7473	0.4118
	T55	37.8822	38.2343	38.9740	38.9252	38.5039	0.4630
	T65	37.3697	37.6458	38.5969	38.7270	38.0849	0.5871
pH 8-	T35	48.6604	48.8058	49.5045		48.9902	0.3685
	T45	47.4702	47.2010	48.2672	48.5476	47.8715	0.5532
	T55	38.7433	38.5374	39.3465	39.4082	39.0088	0.3762
	T65	37.5763	37.3515	38.2552	37.8825	37.7664	0.3394
pH 9-	T35	49.3003	48.1639	47.8723	47.7700	48.0153	0.6199
		47.5433	47.4419				
	T45	46.6982	46.6439	47.4350	47.4743	47.0628	0.3925
	T55	39.0977	39.5385	39.2670	39.5494	39.3631	0.1905
	T65	37.0057	37.6060	37.4843	37.1710	37.3167	0.2396

## APPENDIX A8 PERCENT OF DS REMAINED AT 3 MONTHS

	PERCENT				MEAN	S.D.
pH 5-T35	64.26	64.00	64.40		64.22	0.1682
-T45	35.96	33.32	35.38	35.60	35.07	1.0287
-T55	2.45	1.96	1.15	1.08	1.66	0.5728
-T65	1.48	1.19	0.54	1.37	1.15	0.3648
pH 6-T35	95.26	96.33	99.77	99.63	97.75	1.9897
-T45	91.27	91.56	94.72	94.71	93.06	1.6532
-T55	68.16	69.12	71.30	70.11	69.67	1.1680
-T65	68.77	69.27	71.06	70.88	69.99	0.9925
pH 7-T35	102.62	102.98	105.88	105.51	104.25	1.4599
-T45	98.66	99.20	100.62		99.49	0.8237
-T55	75.76	76.47	77.95	77.85	77.01	0.9261
-T65	74.74	75.29	77.19	77.45	76.17	1.1742
pH 8-T35	97.32	97.61	99.01		97.98	0.7369
-T45	94.94	94.40	96.53	97.10	95.74	1.1064
-T55	77.49	77.07	78.69	78.82	78.02	0.7525
-T65	75.15	74.70	76.51	75.76	75.53	0.6787
pH 9-T35	98.60	96.33	95.74	95.54	96.03	1.2397
	95.09	94.88				
-T45	93.40	93.29	94.87	94.95	94.13	0.7850
-T55	78.20	79.08	78.53	79.10	78.73	0.3809
-T65	74.01	75.21	74.97	74.34	74.63	0.4793

## APPENDIX A9 STABILITY DATA OF DS AT 4 MONTHS

		CONCENTRATION (mcg/mL)		MEAN	S.D.
pH 5-	T35	32.1802	29.5767	30.8784	1.3018
	T45	13.7996	13.6573	13.7285	0.0712
	T55	2.0094	2.7269	2.3682	0.3588
	T65	1.9055	1.8660	1.8857	0.0198
pH 6-	T35	48.2294	47.4947	47.8621	0.3673
	T45	45.3814	44.0350	44.7082	0.6732
	T55	32.7911	32.9548	32.8730	0.0819
	T65	31.9987	31.7281	31.8634	0.1353
pH 7-	T35	49.3585	49.8726	49.6155	0.2570
	T45	45.9440	46.2830	46.1135	0.1695
	T55	36.2385	36.5795	36.4090	0.1705
	T65	34.0966	34.1234	34.1100	0.0134
pH 8-	T35	47.5880	47.6663	47.6271	0.0391
	T45	45.5399	45.1597	45.3498	0.1901
	T55	36.2812	36.7750	36.5281	0.2469
	T65	34.6895	35.1561	34.9228	0.2333
pH 9-	T35	47.4329	47.4306	47.4318	0.0012
	T45	44.6970	44.8886	44.7928	0.0958
	T55	36.1806	36.7058	36.4432	0.2626
	T65	33.7617	33.7458	33.7538	0.0080

## APPENDIX A10 PERCENT OF DS REMAINED AT 4 MONTHS

	PERCENT		MEAN	S.D.
pH 5-T35	64.36	59.15	61.76	2.6036
-T45	27.60	27.31	27.46	0.1424
-T55	4.02	5.45	4.74	0.7175
-T65	3.81	3.73	3.77	0.0395
pH 6-T35	96.46	94.99	95.72	0.7347
-T45	90.76	88.07	89.42	1.3464
-T55	65.58	65.91	65.75	0.1638
-T65	64.00	63.46	63.73	0.2706
pH 7-T35	98.72	99.75	99.23	0.5141
-T45	91.89	92.57	92.23	0.3390
-T55	72.48	73.16	72.82	0.3410
-T65	68.19	68.25	68.22	0.0269
pH 8-T35	95.18	95.33	95.25	0.0783
-T45	91.08	90.32	90.70	0.3801
-T55	72.56	73.55	73.06	0.4938
-T65	69.38	70.31	69.85	0.4666
pH 9-T35	94.87	94.86	94.86	0.0023
-T45	89.39	89.78	89.59	0.1915
-T55	72.36	73.41	72.89	0.5252
-T65	67.52	67.49	67.51	0.0159

## APPENDIX A11 STABILITY DATA OF DS AT 5 MONTHS

		CONCENTRATION (mcg/mL)		MEAN	S.D.		
pH 5-	T35	24.1092	29.0611	26.5851	2.4759		
	T45	6.9767	9.0067	7.9917	1.0150		
	T55	2.2048	2.2328	2.2188	0.0140		
	T65	2.0557	2.0749	2.0653	0.0096		
pH 6-	T35	46.9670	47.4799	47.8868	47.3217	47.4138	0.3303
	T45	43.9041	44.3040			44.1040	0.2000
	T55	30.5898	30.4283			30.5091	0.0808
	T65	29.4269	29.3477			29.3873	0.0396
pH 7-	T35	51.3367	51.2047			51.2707	0.0660
	T45	48.0813	47.7877			47.9345	0.1468
	T55	34.7829	34.6191			34.7010	0.0819
	T65	32.8744	33.3087			33.0916	0.2171
pH 8-	T35	49.0235	48.8114			48.9174	0.1060
	T45	46.2867	46.5424			46.4146	0.1279
	T55	35.0114	35.1578			35.0846	0.0732
	T65	33.8557	33.9380			33.8968	0.0411
pH 9-	T35	48.0377	47.6208			47.8293	0.2085
	T45	46.2497	46.1164			46.1830	0.0667
	T55	36.7957	36.8635			36.8296	0.0339
	T65	35.3212	35.4643			35.3928	0.0716

## APPENDIX A12 PERCENT OF DS REMAINED AT 5 MONTHS

		PERCENT		MEAN		S.D.	
pH 5-T35		48.22	58.12		53.17	4.9519	
	-T45	13.95	18.01		15.98	2.0300	
	-T55	4.41	4.47		4.44	0.0280	
	-T65	4.11	4.15		4.13	0.0192	
pH 6-T35		93.93	94.96	95.77	94.64	94.83	0.6605
	-T45	87.81	88.61			88.21	0.3999
	-T55	61.18	60.86			61.02	0.1615
	-T65	58.85	58.70			58.77	0.0792
pH 7-T35		102.67	102.41			102.54	0.1320
	-T45	96.16	95.58			95.87	0.2936
	-T55	69.57	69.24			69.40	0.1639
	-T65	65.75	66.62			66.18	0.4343
pH 8-T35		98.05	97.62			97.83	0.2121
	-T45	92.57	93.08			92.83	0.2558
	-T55	70.02	70.32			70.17	0.1464
	-T65	67.71	67.88			67.79	0.0822
pH 9-T35		96.08	95.24			95.66	0.4170
	-T45	92.50	92.23			92.37	0.1333
	-T55	73.59	73.73			73.66	0.0678
	-T65	70.64	70.93			70.79	0.1432

## APPENDIX A13 STABILITY DATA OF DE AT 2 WEEKS

	CONCENTRATION (mcg/mL)		MEAN	S.D.
pH 5-T35	45.1949	45.2421	45.2185	0.0236
-T45	44.6595	46.4662	45.5628	0.9034
-T55	52.2622	54.7776	53.5199	1.2577
-T65	49.0579	52.8025	50.9302	1.8723
pH 6-T35	51.7011	51.9434	51.8222	0.1212
-T45	51.3665	51.4764	51.4214	0.0549
-T55	49.8977	49.8440	49.8709	0.0269
-T65	49.9871	49.6264	49.8068	0.1804
pH 7-T35	52.6265	52.3211	52.4738	0.1527
-T45	51.4407	52.2699	51.8553	0.4146
-T55	49.5116	50.1826	49.8471	0.3355
-T65	49.9813	50.4918	50.2366	0.2552
pH 8-T35	52.2461	52.8096	52.5279	0.2817
-T45	51.8259	52.1821	52.0040	0.1781
-T55	50.5940	50.7136	50.6538	0.0598
-T65	50.4878	50.5008	50.4943	0.0065
pH 9-T35	52.3085	52.0203	52.1644	0.1441
-T45	52.2568	51.8643	52.0605	0.1962
-T55	50.6878	50.7416	50.7147	0.0269
-T65	50.5618	50.7259	50.6439	0.0820



## APPENDIX A14 PERCENT OF DE REMAINED AT 2 WEEKS

	PERCENT		MEAN	S. D.
pH 5-T35	90.39	90.48	90.44	0.0472
-T45	89.32	92.93	91.13	1.8068
-T55	104.52	109.56	107.04	2.5154
-T65	98.12	105.60	101.86	3.7446
pH 6-T35	103.40	103.89	103.64	0.2423
-T45	102.73	102.95	102.84	0.1099
-T55	99.80	99.69	99.74	0.0537
-T65	99.97	99.25	99.61	0.3608
pH 7-T35	105.25	104.64	104.95	0.3053
-T45	102.88	104.54	103.71	0.8292
-T55	99.02	100.37	99.69	0.6710
-T65	99.96	100.98	100.47	0.5105
pH 8-T35	104.49	105.62	105.06	0.5635
-T45	103.65	104.36	104.01	0.3562
-T55	101.19	101.43	101.31	0.1196
-T65	100.98	101.00	100.99	0.0130
pH 9-T35	104.62	104.04	104.33	0.2882
-T45	104.51	103.73	104.12	0.3924
-T55	101.38	101.48	101.43	0.0538
-T65	101.12	101.45	101.29	0.1641

## APPENDIX A15 STABILITY DATA OF DE AT 1 MONTH

		CONCENTRATION (mcg/mL)		MEAN	S.D.
pH 5-	T35	53.9488	55.3430	54.6459	0.6971
	T45	55.6913	54.7134	55.2023	0.4890
	T55	50.9755	50.4801	50.7278	0.2477
	T65	49.7822	50.4253	50.1038	0.3216
pH 6-	T35	51.4492	51.2699	51.3595	0.0897
	T45	51.2071	51.7676	51.4874	0.2802
	T55	47.7543	47.1963	47.4753	0.2790
	T65	47.2458	47.7864	47.5161	0.2703
pH 7-	T35	54.0342	51.1910	52.6126	1.4216
	T45	50.3054	50.1703	50.2378	0.0675
	T55	47.6792	47.0499	47.3646	0.3147
	T65	47.7282	47.1611	47.4446	0.2835
pH 8-	T35	51.7357	51.1867	51.4612	0.2745
	T45	51.1687	51.5896	51.3791	0.2104
	T55	48.4784	48.4940	48.4862	0.0078
	T65	47.3595	47.6295	47.4945	0.1350
pH 9-	T35	51.1981	50.6242	50.9111	0.2870
	T45	50.8443	50.3051	50.5747	0.2696
	T55	48.4384	49.4079	48.9232	0.4847
	T65	47.3603	47.9874	47.6738	0.3135

## APPENDIX A16 PERCENT OF DE REMAINED AT 1 MONTH

	PERCENT		MEAN	S. D.
pH 5-T35	107.90	110.69	109.29	1.3943
-T45	111.38	109.43	110.40	0.9779
-T55	101.95	100.96	101.46	0.4954
-T65	99.56	100.85	100.21	0.6431
pH 6-T35	102.90	102.54	102.72	0.1794
-T45	102.41	103.54	102.97	0.5605
-T55	95.51	94.39	94.95	0.5579
-T65	94.49	95.57	95.03	0.5406
pH 7-T35	108.07	102.38	105.23	2.8432
-T45	100.61	100.34	100.48	0.1351
-T55	95.36	94.10	94.73	0.6293
-T65	95.46	94.32	94.89	0.5671
pH 8-T35	103.47	102.37	102.92	0.5491
-T45	102.34	103.18	102.76	0.4209
-T55	96.96	96.99	96.97	0.0157
-T65	94.72	95.26	94.99	0.2701
pH 9-T35	102.40	101.25	101.82	0.5739
-T45	101.69	100.61	101.15	0.5392
-T55	96.88	98.82	97.85	0.9695
-T65	94.72	95.97	95.35	0.6271

## APPENDIX A17 STABILITY DATA OF DE AT 2 MONTHS

		CONCENTRATION (mcg/mL)		MEAN	S.D.
pH 5-	T35	53.1333	53.1760	53.1547	0.0213
	T45	53.3751	54.1391	53.7571	0.3820
	T55	45.2700	44.9966	45.1333	0.1367
	T65	43.1745	42.6813	42.9279	0.2466
pH 6-	T35	50.2378	50.5699	50.4038	0.1661
	T45	49.4514	48.9803	49.2158	0.2356
	T55	42.7682	43.9267	43.3475	0.5792
	T65	42.2480	41.9940	42.1210	0.1270
pH 7-	T35	49.0605	48.2822	48.6713	0.3892
	T45	48.5759	48.7021	48.6390	0.0631
	T55	43.4794	44.2568	43.8681	0.3887
	T65	41.2020	41.1579	41.1800	0.0221
pH 8-	T35	50.4781	50.1498	50.3139	0.1641
	T45	49.0065	49.0538	49.0301	0.0236
	T55	43.8668	43.7600	43.8134	0.0534
	T65	42.2083	42.6966	42.4524	0.2442
pH 9-	T35	49.9831	49.7325	49.8578	0.1253
	T45	49.1883	48.9389	49.0636	0.1247
	T55	44.2754	44.0154	44.1454	0.1300
	T65	42.4990	42.6399	42.5695	0.0705

## APPENDIX A18 PERCENT OF DE REMAINED AT 2 MONTHS

	PERCENT		MEAN	S.D.	
pH 5-T35	106.27	106.35	106.31	0.0426	
	-T45	106.75			108.28
	-T55	90.54			89.99
	-T65	86.35			85.36
pH 6-T35	100.48	101.14	100.81	0.3322	
	-T45	98.90			97.96
	-T55	85.54			87.85
	-T65	84.50			83.99
pH 7-T35	98.12	96.56	97.34	0.7784	
	-T45	97.15			97.40
	-T55	86.96			88.51
	-T65	82.40			82.32
pH 8-T35	100.96	100.30	100.63	0.3283	
	-T45	98.01			98.11
	-T55	87.73			87.52
	-T65	84.42			85.39
pH 9-T35	99.97	99.47	99.72	0.2506	
	-T45	98.38			97.88
	-T55	88.55			88.03
	-T65	85.00			85.28

## APPENDIX A19 STABILITY DATA OF DE AT 3 MONTHS

		CONCENTRATION (mcg/mL)		MEAN	S.D.
pH 5	-T35	36.0032	35.6238	35.8135	0.1897
	-T45	43.7129	44.4748	44.0938	0.3810
	-T55	40.3676	39.8572	40.1124	0.2552
	-T65	37.7658	37.5332	37.6495	0.1163
pH 6	-T35	49.7864	50.6604	50.2234	0.4370
	-T45	48.9582	49.3971	49.1777	0.2195
	-T55	40.1316	40.1883	40.1599	0.0284
	-T65	36.5779	36.4139	36.4959	0.0820
pH 7	-T35	50.8568	50.4525	50.6547	0.2022
	-T45	49.0984	49.1855	49.1419	0.0436
	-T55	39.1254	39.3982	39.2618	0.1364
	-T65	37.9209	37.9708	37.9458	0.0250
pH 8	-T35	51.3242	51.1031	51.2136	0.1105
	-T45	49.8293	49.9631	49.8962	0.0669
	-T55	42.3233	42.5348	42.4290	0.1058
	-T65	41.9435	41.8244	41.8840	0.0596
pH 9	-T35	51.2203	51.3286	51.2745	0.0541
	-T45	50.3061	49.9898	50.1479	0.1581
	-T55	43.4891	43.3837	43.4364	0.0527
	-T65	41.0954	41.0064	41.0509	0.0445

## APPENDIX A20 PERCENT OF DE REMAINED AT 3 MONTHS

	PERCENT		MEAN	S.D.
pH 5-T35	72.01	71.25	71.63	0.3794
-T45	87.43	88.95	88.19	0.7619
-T55	80.74	79.71	80.22	0.5104
-T65	75.53	75.07	75.30	0.2326
pH 6-T35	99.57	101.32	100.45	0.8740
-T45	97.92	98.79	98.36	0.4390
-T55	80.26	80.38	80.32	0.0567
-T65	73.16	72.83	72.99	0.1641
pH 7-T35	101.71	100.90	101.31	0.4043
-T45	98.20	98.37	98.28	0.0872
-T55	78.25	78.80	78.52	0.2728
-T65	75.84	75.94	75.89	0.0500
pH 8-T35	102.65	102.21	102.43	0.2211
-T45	99.66	99.93	99.79	0.1338
-T55	84.65	85.07	84.86	0.2115
-T65	83.89	83.65	83.77	0.1191
pH 9-T35	102.44	102.66	102.55	0.1082
-T45	100.61	99.98	100.30	0.3163
-T55	86.98	86.77	86.87	0.1054
-T65	82.19	82.01	82.10	0.0890

## APPENDIX A21 STABILITY DATA OF DE AT 4 MONTHS

		CONCENTRATION (mcg/mL)			MEAN	S. D.	
pH 5-	T35	45.8382	45.6085		45.7233	0.1148	
	T45	42.8716	46.0392	44.1584	44.3564	1.3007	
	T55	34.3268	35.8665		35.0967	0.7699	
	T65	31.3257	32.7784		32.0520	0.7264	
pH 6-	T35	48.0621	49.5244	50.9932	51.3224	49.9755	1.2956
	T45	49.2306	49.3533		49.2919	0.0614	
	T55	35.7929	35.9981		35.8955	0.1026	
	T65	33.1253	33.2000		33.1627	0.0373	
pH 7-	T35	50.6268	51.1467		50.8868	0.2600	
	T45	45.1582	45.1682		45.1632	0.0050	
	T55	35.0905	35.2243		35.1574	0.0669	
	T65	34.1514	33.9662		34.0588	0.0926	
pH 8-	T35	52.8431	52.4803		52.6617	0.1814	
	T45	49.9328	50.3125		50.1227	0.1899	
	T55	38.0567	37.5133		37.7850	0.2717	
	T65	37.5620	35.0740		36.3180	1.2440	
pH 9-	T35	50.9823	49.3759		50.1791	0.8032	
	T45	49.3759	49.6861		49.5310	0.1551	
	T55	41.4305	41.3667		41.3986	0.0319	
	T65	39.5586	39.2144		39.3865	0.1721	



## APPENDIX A22 PERCENT OF DE REMAINED AT 4 MONTHS

	PERCENT		MEAN	S.D.
pH 5-T35	91.68	91.22	91.45	0.2297
-T45	85.74	92.08	88.71	2.6015
-T55	68.65	71.73	70.19	1.5397
-T65	62.65	65.56	64.10	1.4528
			88.32	
pH 6-T35	96.12	99.05	99.95	2.5912
-T45	98.46	98.71	98.58	0.1228
-T55	71.59	72.00	71.79	0.2051
-T65	66.25	66.40	66.33	0.0747
			101.99	102.64
pH 7-T35	101.25	102.29	101.77	0.5200
-T45	90.32	90.34	90.33	0.0100
-T55	70.18	70.45	70.31	0.1338
-T65	68.30	67.93	68.12	0.1852
pH 8-T35	105.69	104.96	105.32	0.3628
-T45	99.87	100.63	100.25	0.3797
-T55	76.11	75.03	75.57	0.5433
-T65	75.12	70.15	72.64	2.4881
pH 9-T35	101.96	98.75	100.36	1.6064
-T45	98.75	99.37	99.06	0.3102
-T55	82.86	82.73	82.80	0.0638
-T65	79.12	78.43	78.77	0.3441

## APPENDIX A23 STABILITY DATA OF DE AT 5 MONTHS

		CONCENTRATION (mcg/mL)		MEAN	S.D.		
pH 5-	T35	33.5139	32.8966	54.2771	54.5072	43.7987	10.5960
	T45	44.4882	44.5931			44.5407	0.0525
	T55	31.8027	31.8842			31.8434	0.0407
	T65	29.2264	28.7230			28.9747	0.2517
pH 6-	T35	48.4964	48.8114			48.6539	0.1575
	T45	45.6577	45.7303			45.6940	0.0363
	T55	31.5456	31.7747			31.6602	0.1145
	T65	29.4805	29.4736			29.4770	0.0035
pH 7-	T35	49.1845	48.6467			48.9156	0.2689
	T45	46.1616	46.0634			46.1125	0.0491
	T55	32.5146	32.4480			32.4813	0.0333
	T65	30.9989	31.1079			31.0534	0.0545
pH 8-	T35	49.5744	49.5019			49.5382	0.0363
	T45	47.2706	47.3799			47.3253	0.0546
	T55	36.9938	34.4014			35.6976	1.2962
	T65	34.6443	34.8007			34.7225	0.0782
pH 9-	T35	49.8121	49.7852			49.7987	0.0134
	T45	47.9715	47.8931			47.9323	0.0392
	T55	38.3867	38.2202			38.3034	0.0833
	T65	34.9281	35.0939			35.0110	0.0829

## APPENDIX A24 PERCENT OF DE REMAINED AT 5 MONTHS

		PERCENT		MEAN	S.D.		
pH 5-	T35	67.03	65.79	108.55	109.01	87.60	21.1920
	T45	88.98	89.19			89.08	0.1049
	T55	63.61	63.77			63.69	0.0815
	T65	58.45	57.45			57.95	0.5035
pH 6-	T35	96.99	97.62			97.31	0.3149
	T45	91.32	91.46			91.39	0.0726
	T55	63.09	63.55			63.32	0.2291
	T65	58.96	58.95			58.95	0.0069
pH 7-	T35	98.37	97.29			97.83	0.5378
	T45	92.32	92.13			92.22	0.0982
	T55	65.03	64.90			64.96	0.0665
	T65	62.00	62.22			62.11	0.1090
pH 8-	T35	99.15	99.00			99.08	0.0725
	T45	94.54	94.76			94.65	0.1093
	T55	73.99	68.80			71.40	2.5924
	T65	69.29	69.60			69.44	0.1563
pH 9-	T35	99.62	99.57			99.60	0.0269
	T45	95.94	95.79			95.86	0.0785
	T55	76.77	76.44			76.61	0.1665
	T65	69.86	70.19			70.02	0.1658

## APPENDIX A25 STUDENT'S t TEST OF FORMULATION 7 AND 8

FOR 7 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.61	2.70	3.24	3.18	0.21	1.46	0.37
10	5.11	4.73	5.08	4.97	0.04	4.39	0.17
15	5.74	5.26	6.61	5.87	0.47	2.28	0.56
25	7.16	6.85	8.13	7.38	0.45	4.06	0.55
40	8.79	8.71	10.97	9.49	1.64	3.39	1.05
60	12.77	11.07	13.62	12.49	1.69	5.16	1.06
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 8 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.96	2.53	1.98	2.49	0.24		0.40
10	4.01	3.50	3.23	3.58	0.16		0.32
15	5.05	4.42	4.21	4.56	0.19		0.36
25	5.59	5.31	5.33	5.41	0.02		0.13
40	6.45	6.55	6.08	6.36	0.06		0.20
60	7.29	7.49	7.97	7.58	0.12		0.29
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A26 STUDENT'S t TEST OF FORMULA 9 AND 10

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FOR 9							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	1.63	1.57	1.36	1.52	0.02	3.05	0.12
10	2.61	2.50	2.34	2.48	0.02	4.33	0.11
15	3.39	3.23	3.05	3.22	0.03	4.59	0.14
25	4.93	4.35	4.58	4.62	0.09	5.53	0.24
40	6.12	5.85	6.40	6.12	0.08	5.98	0.22
60	7.91	7.44	7.58	7.64	0.06	4.38	0.20
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 10							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	1.22	0.89	0.85	0.99	0.04		0.17
10	1.94	1.52	1.63	1.70	0.05		0.18
15	2.56	2.19	2.14	2.30	0.05		0.19
25	3.46	3.21	3.42	3.36	0.02		0.11
40	4.83	4.62	4.92	4.79	0.02		0.13
60	6.39	6.04	6.70	6.38	0.11		0.27
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

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## APPENDIX A27 STUDENT'S t TEST OF FORMULA 17 AND 18

FOR 17							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.12	2.80	2.40	2.77	0.13	3.88	0.29
10	4.73	4.65	3.99	4.46	0.16	3.77	0.33
15	5.80	5.64	5.39	5.61	0.04	5.95	0.17
25	7.81	7.59	7.49	7.63	0.03	7.31	0.13
40	9.55	10.20	9.81	9.85	0.11	8.39	0.27
60	11.75	12.07	12.64	12.15	0.20	6.65	0.37
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 18							
TIME	S1	S2	S3	MEAN	VARAINCE		
5	1.87	1.54	1.50	1.64	0.04		0.17
10	3.34	2.55	2.49	2.79	0.23		0.39
15	4.03	3.41	3.16	3.53	0.20		0.37
25	5.34	4.37	4.45	4.72	0.29		0.44
40	6.43	5.31	5.43	5.72	0.38		0.50
60	8.22	6.40	6.72	7.11	0.94		0.79
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A28 STUDENT'S t TEST OF FORMULA 19 AND 20

FOR 19							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.72	2.22	1.85	2.26	0.19	2.21	0.36
10	4.03	3.51	3.27	3.60	0.15	3.13	0.32
15	5.02	4.37	4.21	4.53	0.18	3.60	0.35
25	6.58	6.03	5.88	6.16	0.14	5.27	0.30
40	8.01	7.43	7.53	7.66	0.10	4.86	0.25
60	9.72	9.53	9.62	9.62	0.01	7.02	0.08
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 20							
TIME	S1	S2	S3	MEAN	VARAINCE		
5	1.67	1.43	1.57	1.56	0.01		0.10
10	2.79	2.41	2.71	2.64	0.04		0.16
15	3.50	3.25	3.43	3.39	0.02		0.11
25	4.73	4.46	4.77	4.65	0.03		0.14
40	6.13	5.52	6.23	5.96	0.15		0.31
60	7.52	6.95	7.80	7.42	0.19		0.35
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A29 STUDENT'S t TEST OF FORMULA 7 AND 9

FOR 7							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.61	2.70	3.24	3.18	0.21	4.91	0.37
10	5.11	4.73	5.08	4.97	0.04	14.02	0.17
15	5.74	5.26	6.61	5.87	0.47	5.31	0.56
25	7.16	6.85	8.13	7.38	0.45	5.36	0.55
40	8.79	8.71	10.97	9.49	1.64	3.63	1.05
60	12.77	11.07	13.62	12.49	1.69	5.19	1.06
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 9							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	1.63	1.57	1.36	1.52	0.02		0.12
10	2.61	2.50	2.34	2.48	0.02		0.11
15	3.39	3.23	3.05	3.22	0.03		0.14
25	4.93	4.35	4.58	4.62	0.09		0.24
40	6.12	5.85	6.40	6.12	0.08		0.22
60	7.91	7.44	7.58	7.64	0.06		0.20
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR



## APPENDIX A30 STUDENT'S t TEST OF FORMULA 8 AND 10

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FOR 8 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.96	2.53	1.98	2.49	0.24	4.00	0.40
10	4.01	3.50	3.23	3.58	0.16	5.89	0.32
15	5.05	4.42	4.21	4.56	0.19	6.48	0.36
25	5.59	5.31	5.33	5.41	0.02	14.05	0.13
40	6.45	6.55	6.08	6.36	0.06	7.62	0.20
60	7.29	7.49	7.97	7.58	0.12	3.55	0.29
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 10 TIME	S1	S2	S3	MEAN	VARAINCE	
5	1.22	0.89	0.85	0.99	0.04	0.17
10	1.94	1.52	1.63	1.70	0.05	0.18
15	2.56	2.19	2.14	2.30	0.05	0.19
25	3.46	3.21	3.42	3.36	0.02	0.11
40	4.83	4.62	4.92	4.79	0.02	0.13
60	6.39	6.04	6.70	6.38	0.11	0.27
90				0.00	0.00	ERR
120				0.00	0.00	ERR
180				0.00	0.00	ERR
240				0.00	0.00	ERR
300				0.00	0.00	ERR
360				0.00	0.00	ERR

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## APPENDIX A31 STUDENT'S t TEST OF FORMULA 17 AND 19

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FOR 17

TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.12	2.80	2.40	2.77	0.13	1.27	0.29
10	4.73	4.65	3.99	4.46	0.16	2.15	0.33
15	5.80	5.64	5.39	5.61	0.04	3.20	0.17
25	7.81	7.59	7.49	7.63	0.03	5.14	0.13
40	9.55	10.20	9.81	9.85	0.11	6.89	0.27
60	11.75	12.07	12.64	12.15	0.20	7.77	0.37
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 19

TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	2.72	2.22	1.85	2.26	0.19	0.36
10	4.03	3.51	3.27	3.60	0.15	0.32
15	5.02	4.37	4.21	4.53	0.18	0.35
25	6.58	6.03	5.88	6.16	0.14	0.30
40	8.01	7.43	7.53	7.66	0.10	0.25
60	9.72	9.53	9.62	9.62	0.01	0.08
90				0.00	0.00	ERR
120				0.00	0.00	ERR
180				0.00	0.00	ERR
240				0.00	0.00	ERR
300				0.00	0.00	ERR
360				0.00	0.00	ERR

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## APPENDIX A32 STUDENT'S t TEST OF FORMULA 18 AND 20

FOR 18							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	1.87	1.54	1.50	1.64	0.04	0.48	0.17
10	3.34	2.55	2.49	2.79	0.23	0.43	0.39
15	4.03	3.41	3.16	3.53	0.20	0.42	0.37
25	5.34	4.37	4.45	4.72	0.29	0.17	0.44
40	6.43	5.31	5.43	5.72	0.38	-0.46	0.50
60	8.22	6.40	6.72	7.11	0.94	-0.41	0.79
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 20							
TIME	S1	S2	S3	MEAN	VARAINCE		
5	1.67	1.43	1.57	1.56	0.01		0.10
10	2.79	2.41	2.71	2.64	0.04		0.16
15	3.50	3.25	3.43	3.39	0.02		0.11
25	4.73	4.46	4.77	4.65	0.03		0.14
40	6.13	5.52	6.23	5.96	0.15		0.31
60	7.52	6.95	7.80	7.42	0.19		0.35
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A33 STUDENT'S t TEST OF FORMULA 53 AND 54

FOR 53							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	8.87	7.84	8.46	8.39	0.27	2.17	0.42
10	15.55	13.48	13.85	14.29	1.22	1.91	0.90
15	22.02	19.79	18.88	20.23	2.61	2.37	1.32
25	32.55	27.44	26.04	28.68	11.74	1.44	2.80
40	45.62	41.61	40.38	42.54	7.51	3.44	2.24
60	62.51	56.61	53.12	57.41	22.53	2.58	3.88
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 54							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	6.77	7.36	7.75	7.29	0.24		0.40
10	11.82	12.81	13.06	12.56	0.43		0.54
15	16.33	17.71	17.63	17.22	0.60		0.63
25	24.04	25.45	25.69	25.06	0.79		0.73
40	34.60	36.47	35.37	35.48	0.88		0.77
60	47.33	49.73	48.40	48.49	1.45		0.98
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A34 STUDENT'S t TEST OF FORLULA 57 AND 58

FOR 57							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.84	3.71	3.07	3.54	0.17	1.57	0.34
10	5.88	5.66	4.59	5.38	0.48	1.78	0.56
15	7.87	7.13	6.64	7.21	0.38	2.48	0.51
25	11.18	9.72	10.60	10.50	0.54	3.31	0.60
40	16.76	15.23	17.22	16.40	1.09	2.85	0.85
60	24.19	22.82	25.49	24.17	1.78	3.04	1.09
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 58							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.31	2.89	2.56	2.92	0.14		0.31
10	4.87	4.07	4.01	4.32	0.23		0.39
15	6.36	4.91	5.04	5.44	0.64		0.66
25	8.75	6.99	7.03	7.59	1.01		0.82
40	14.20	10.71	11.76	12.22	3.21		1.46
60	20.94	16.45	16.66	18.02	6.42		2.07
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A35 STUDENT'S t TEST OF FORMULA 59 AND 60

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FOR 59							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	6.41	6.45	6.44	6.43	0.00	4.00	0.02
10	10.52	10.74	10.76	10.67	0.02	4.24	0.11
15	14.64	14.49	14.75	14.63	0.02	-0.31	0.11
25	22.86	21.92	21.74	22.17	0.36	1.50	0.49
40	31.26	31.70	30.27	31.08	0.54	0.94	0.60
60	45.94	44.73	46.55	45.74	0.86	4.49	0.76
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 60							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	5.93	5.66	6.04	5.88	0.04		0.16
10	10.11	9.75	10.05	9.97	0.04		0.16
15	14.68	14.16	15.49	14.78	0.45		0.55
25	19.69	21.70	21.26	20.88	1.12		0.86
40	28.56	29.26	31.76	29.86	2.83		1.37
60	40.20	41.11	42.35	41.22	1.16		0.88
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

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## APPENDIX A36 STUDENT'S t TEST OF FORMULA 62 AND 63

FOR 62							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.86	2.65	2.59	2.70	0.02	0.84	0.12
10	4.31	3.97	4.33	4.20	0.04	0.98	0.17
15	5.84	5.57	5.71	5.71	0.02	2.10	0.11
25	9.35	8.41	8.04	8.60	0.46	2.90	0.55
40	15.58	13.45	14.03	14.35	1.21	2.94	0.90
60	23.85	21.07	22.83	22.58	1.98	2.79	1.15
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 63							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.91	2.02	2.32	2.42	0.21		0.37
10	4.22	4.01	3.58	3.94	0.11		0.27
15	5.47	5.08	4.65	5.07	0.17		0.33
25	7.30	6.91	6.20	6.80	0.31		0.46
40	12.42	11.12	10.76	11.43	0.76		0.71
60	20.15	16.97	17.00	18.04	3.34		1.49
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A37 STUDENT'S t TEST OF FORMULA 53 AND 57

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FOR 53							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	8.87	7.84	8.46	8.39	0.27	10.35	0.42
10	15.55	13.48	13.85	14.29	1.22	9.69	0.90
15	22.02	19.79	18.88	20.23	2.61	10.64	1.32
25	32.55	27.44	26.04	28.68	11.74	7.33	2.80
40	45.62	41.61	40.38	42.54	7.51	12.61	2.24
60	62.51	56.61	53.12	57.41	22.53	9.54	3.88
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 57							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.84	3.71	3.07	3.54	0.17		0.34
10	5.88	5.66	4.59	5.38	0.48		0.56
15	7.87	7.13	6.64	7.21	0.38		0.51
25	11.18	9.72	10.60	10.50	0.54		0.60
40	16.76	15.23	17.22	16.40	1.09		0.85
60	24.19	22.82	25.49	24.17	1.78		1.09
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

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## APPENDIX A38 STUDENT'S t TEST OF FORMULA 59 AND 62

FOR 59							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	6.41	6.45	6.44	6.43	0.00	36.85	0.02
10	10.52	10.74	10.76	10.67	0.02	37.78	0.11
15	14.64	14.49	14.75	14.63	0.02	67.17	0.11
25	22.86	21.92	21.74	22.17	0.36	21.23	0.49
40	31.26	31.70	30.27	31.08	0.54	17.88	0.60
60	45.94	44.73	46.55	45.74	0.86	19.45	0.76
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 62							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.86	2.65	2.59	2.70	0.02		0.12
10	4.31	3.97	4.33	4.20	0.04		0.17
15	5.84	5.57	5.71	5.71	0.02		0.11
25	9.35	8.41	8.04	8.60	0.46		0.55
40	15.58	13.45	14.03	14.35	1.21		0.90
60	23.85	21.07	22.83	22.58	1.98		1.15
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A39 STUDENT'S t TEST OF FORMULA 79 AND 80

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FOR 79							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.56	2.88	3.13	3.19	0.12	-0.16	0.28
10	5.73	4.62	4.90	5.08	0.33	0.59	0.47
15	7.23	5.97	6.55	6.58	0.40	0.77	0.51
25	10.94	7.70	9.87	9.50	2.73	0.68	1.35
40	16.44	12.63	14.83	14.63	3.66	0.62	1.56
60	24.30	19.50	20.25	21.35	6.67	0.52	2.11
90	32.42	27.85	27.06	29.11	8.37	0.38	2.36
120	41.22	35.56	34.00	36.93	14.43	0.34	3.10
180	52.40	47.55	47.39	49.11	8.11	1.94	2.32
240	62.13	60.31	54.27	58.90	16.93	1.73	3.36
300	68.92	69.29	62.13	66.78	16.25	1.97	3.29
360	74.95	76.02	68.21	73.06	17.93	1.92	3.46

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FOR 80							
TIME	S1	S2	S3	MEAN	VARAINCE		
5	3.45	4.25	2.23	3.31	1.03		0.83
10	4.89	5.53	3.06	4.49	1.64		1.05
15	6.49	6.62	4.07	5.73	2.06		1.17
25	9.99	8.62	6.31	8.31	3.46		1.52
40	16.70	11.69	10.53	12.97	10.75		2.68
60	25.23	16.19	16.23	19.22	27.12		4.25
90	34.56	22.91	24.27	27.25	40.58		5.20
120	43.60	29.92	31.10	34.87	57.46		6.19
180	45.90	39.75	44.14	43.26	10.03		2.59
240	55.64	50.01	52.74	52.80	7.93		2.30
300	61.89	58.08	61.43	60.47	4.33		1.70
360	66.02	64.14	69.04	66.40	6.11		2.02

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## APPENDIX A40 STUDENT'S t TEST OF FORMULA 80 AND 81

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FOR 80 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.45	4.25	2.23	3.31	1.03	-0.10	0.83
10	4.89	5.53	3.06	4.49	1.64	-0.47	1.05
15	6.49	6.62	4.07	5.73	2.06	-0.87	1.17
25	9.99	8.62	6.31	8.31	3.46	-0.97	1.52
40	16.70	11.69	10.53	12.97	10.75	-0.75	2.68
60	25.23	16.19	16.23	19.22	27.12	-0.47	4.25
90	34.56	22.91	24.27	27.25	40.58	-0.18	5.20
120	43.60	29.92	31.10	34.87	57.46	0.09	6.19
180	45.90	39.75	44.14	43.26	10.03	0.11	2.59
240	55.64	50.01	52.74	52.80	7.93	1.48	2.30
300	61.89	58.08	61.43	60.47	4.33	2.10	1.70
360	66.02	64.14	69.04	66.40	6.11	2.08	2.02

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FOR 81 TIME	S1	S2	S3	MEAN	VARAINCE	
5	3.97	2.51	3.73	3.40	0.61	0.64
10	5.87	3.69	5.67	5.08	1.45	0.98
15	8.06	5.25	7.77	7.03	2.39	1.26
25	11.22	7.97	11.16	10.12	3.46	1.52
40	16.46	12.46	16.30	15.07	5.13	1.85
60	22.60	18.48	22.27	21.12	5.24	1.87
90	29.78	25.28	29.31	28.12	6.12	2.02
120	35.50	31.72	35.82	34.35	5.20	1.86
180	43.50	41.74	43.77	43.00	1.22	0.90
240	50.11	49.63	49.78	49.84	0.06	0.20
300	57.11	57.98	55.63	56.91	1.41	0.97
360	60.30	64.05	59.27	61.21	6.33	2.05

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## APPENDIX A41 STUDENT'S t TEST OF FORMULA 79 AND 81

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FOR 79

TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.56	2.88	3.13	3.19	0.12	-0.35	0.28
10	5.73	4.62	4.90	5.08	0.33	0.01	0.47
15	7.23	5.97	6.55	6.58	0.40	-0.38	0.51
25	10.94	7.70	9.87	9.50	2.73	-0.35	1.35
40	16.44	12.63	14.83	14.63	3.66	-0.21	1.56
60	24.30	19.50	20.25	21.35	6.67	0.10	2.11
90	32.42	27.85	27.06	29.11	8.37	0.37	2.36
120	41.22	35.56	34.00	36.93	14.43	0.82	3.10
180	52.40	47.55	47.39	49.11	8.11	2.83	2.32
240	62.13	60.31	54.27	58.90	16.93	3.11	3.36
300	68.92	69.29	62.13	66.78	16.25	3.32	3.29
360	74.95	76.02	68.21	73.06	17.93	3.40	3.46

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FOR 81

TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	3.97	2.51	3.73	3.40	0.61	0.64
10	5.87	3.69	5.67	5.08	1.45	0.98
15	8.06	5.25	7.77	7.03	2.39	1.26
25	11.22	7.97	11.16	10.12	3.46	1.52
40	16.46	12.46	16.30	15.07	5.13	1.85
60	22.60	18.48	22.27	21.12	5.24	1.87
90	29.78	25.28	29.31	28.12	6.12	2.02
120	35.50	31.72	35.82	34.35	5.20	1.86
180	43.50	41.74	43.77	43.00	1.22	0.90
240	50.11	49.63	49.78	49.84	0.06	0.20
300	57.11	57.98	55.63	56.91	1.41	0.97
360	60.30	64.05	59.27	61.21	6.33	2.05

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## APPENDIX A42 STUDENT'S t TEST OF FORMULA 89 AND 90

FOR 89							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.63	2.84	3.49	3.32	0.18	0.24	0.34
10	5.14	3.82	4.84	4.60	0.48	-1.10	0.56
15	6.70	5.02	6.49	6.07	0.84	-2.08	0.75
25	10.24	7.59	10.92	9.58	3.10	-1.38	1.44
40	16.84	13.79	17.03	15.89	3.31	-1.66	1.48
60	26.10	21.42	24.34	23.95	5.59	-1.04	1.93
90	35.90	30.56	34.38	33.61	7.57	-0.18	2.25
120	45.63	33.80	42.48	40.64	37.54	0.08	5.00
180	57.90	47.96	53.53	53.13	24.82	0.53	4.07
240	68.85	55.72	65.67	63.41	46.92	0.77	5.59
300	76.31	62.25	71.26	69.94	50.73	0.83	5.82
360	78.70	67.53	74.11	73.45	31.52	0.50	4.58

FOR 90							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.24	3.06	3.43	3.24	0.03		0.15
10	5.02	4.92	5.90	5.28	0.29		0.44
15	7.39	7.23	7.97	7.53	0.15		0.32
25	11.22	11.00	11.81	11.34	0.18		0.34
40	18.49	17.83	17.87	18.06	0.14		0.30
60	26.64	25.86	24.91	25.80	0.75		0.71
90	35.56	33.23	33.22	34.00	1.82		1.10
120	40.90	39.89	40.12	40.30	0.28		0.43
180	53.70	50.56	48.87	51.04	6.01		2.00
240	62.13	58.90	57.28	59.44	6.10		2.02
300	67.62	63.77	65.37	65.59	3.74		1.58
360	75.24	70.31	67.50	71.02	15.35		3.20

## APPENDIX A43 STUDENT'S t TEST OF FORMULA 90 AND 91

FOR 90 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.24	3.06	3.43	3.24	0.03	-1.09	0.15
10	5.02	4.92	5.90	5.28	0.29	1.77	0.44
15	7.39	7.23	7.97	7.53	0.15	5.00	0.32
25	11.22	11.00	11.81	11.34	0.18	5.49	0.34
40	18.49	17.83	17.87	18.06	0.14	5.53	0.30
60	26.64	25.86	24.91	25.80	0.75	4.00	0.71
90	35.56	33.23	33.22	34.00	1.82	3.81	1.10
120	40.90	39.89	40.12	40.30	0.28	3.58	0.43
180	53.70	50.56	48.87	51.04	6.01	3.24	2.00
240	62.13	58.90	57.28	59.44	6.10	3.12	2.02
300	67.62	63.77	65.37	65.59	3.74	3.30	1.58
360	75.24	70.31	67.50	71.02	15.35	2.34	3.20

FOR 91 TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	3.36	3.78	3.32	3.49	0.06	0.21
10	4.81	4.50	4.27	4.53	0.07	0.22
15	5.96	5.52	5.15	5.54	0.16	0.33
25	8.42	7.55	6.65	7.54	0.78	0.72
40	13.49	11.73	10.43	11.88	2.36	1.25
60	20.62	17.74	15.31	17.89	7.07	2.17
90	28.10	25.84	22.39	25.44	8.27	2.35
120	35.53	31.62	29.21	32.12	10.17	2.60
180	45.46	40.62	39.47	41.85	10.10	2.60
240	53.81	47.45	47.02	49.43	14.46	3.10
300	59.90	53.37	52.84	55.37	15.46	3.21
360	66.06	60.40	57.49	61.32	18.99	3.56

## APPENDIX A44 STUDENT'S t TEST OF FORMULA 89 AND 91

FOR 89							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.63	2.84	3.49	3.32	0.18	-0.48	0.34
10	5.14	3.82	4.84	4.60	0.48	0.14	0.56
15	6.70	5.02	6.49	6.07	0.84	0.74	0.75
25	10.24	7.59	10.92	9.58	3.10	1.47	1.44
40	16.84	13.79	17.03	15.89	3.31	2.38	1.48
60	26.10	21.42	24.34	23.95	5.59	2.41	1.93
90	35.90	30.56	34.38	33.61	7.57	2.90	2.25
120	45.63	33.80	42.48	40.64	37.54	1.74	5.00
180	57.90	47.96	53.53	53.13	24.82	2.70	4.07
240	68.85	55.72	65.67	63.41	46.92	2.52	5.59
300	76.31	62.25	71.26	69.94	50.73	2.53	5.82
360	78.70	67.53	74.11	73.45	31.52	2.41	4.58

  

FOR 91						
TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	3.36	3.78	3.32	3.49	0.06	0.21
10	4.81	4.50	4.27	4.53	0.07	0.22
15	5.96	5.52	5.15	5.54	0.16	0.33
25	8.42	7.55	6.65	7.54	0.78	0.72
40	13.49	11.73	10.43	11.88	2.36	1.25
60	20.62	17.74	15.31	17.89	7.07	2.17
90	28.10	25.84	22.39	25.44	8.27	2.35
120	35.53	31.62	29.21	32.12	10.17	2.60
180	45.46	40.62	39.47	41.85	10.10	2.60
240	53.81	47.45	47.02	49.43	14.46	3.10
300	59.90	53.37	52.84	55.37	15.46	3.21
360	66.06	60.40	57.49	61.32	18.99	3.56

## APPENDIX A45 STUDENT'S t TEST OF FORMULA 53 AND PRODUCT C

FOR 53							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	8.87	7.84	8.46	8.39	0.27	4.60	0.42
10	15.55	13.48	13.85	14.29	1.22	3.88	0.90
15	22.02	19.79	18.88	20.23	2.61	3.89	1.32
25	32.55	27.44	26.04	28.68	11.74	3.62	2.80
40	45.62	41.61	40.38	42.54	7.51	4.78	2.24
60	62.51	56.61	53.12	57.41	22.53	4.58	3.88
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

PRODUCT C							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	5.76	6.46	5.29	5.84	0.35		0.48
10	9.15	11.09	8.64	9.63	1.67		1.06
15	12.50	15.02	10.63	12.72	4.85		1.80
25	17.59	20.50	15.66	17.92	5.94		1.99
40	26.38	29.81	21.71	25.97	16.53		3.32
60	37.51	39.98	31.26	36.25	20.20		3.67
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR



## APPENDIX A46 STUDENT'S t TEST OF PRODUCT C AND FORMULA 57

PRODUCT C							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	5.76	6.46	5.29	5.84	0.35	4.52	0.48
10	9.15	11.09	8.64	9.63	1.67	4.10	1.06
15	12.50	15.02	10.63	12.72	4.85	3.40	1.80
25	17.59	20.50	15.66	17.92	5.94	4.12	1.99
40	26.38	29.81	21.71	25.97	16.53	3.22	3.32
60	37.51	39.98	31.26	36.25	20.20	3.64	3.67
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 57						
TIME	S1	S2	S3	MEAN	VARAINCE	
5	3.84	3.71	3.07	3.54	0.17	0.34
10	5.88	5.66	4.59	5.38	0.48	0.56
15	7.87	7.13	6.64	7.21	0.38	0.51
25	11.18	9.72	10.60	10.50	0.54	0.60
40	16.76	15.23	17.22	16.40	1.09	0.85
60	24.19	22.82	25.49	24.17	1.78	1.09
90				0.00	0.00	ERR
120				0.00	0.00	ERR
180				0.00	0.00	ERR
240				0.00	0.00	ERR
300				0.00	0.00	ERR
360				0.00	0.00	ERR

## APPENDIX A47 STUDENT'S t TEST OF FORMULA 57 AND 79

FOR 57							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.84	3.71	3.07	3.54	0.17	0.92	0.34
10	5.88	5.66	4.59	5.38	0.48	0.46	0.56
15	7.87	7.13	6.64	7.21	0.38	1.01	0.51
25	11.18	9.72	10.60	10.50	0.54	0.78	0.60
40	16.76	15.23	17.22	16.40	1.09	1.15	0.85
60	24.19	22.82	25.49	24.17	1.78	1.37	1.09
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 79							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.56	2.88	3.13	3.19	0.12		0.28
10	5.73	4.62	4.90	5.08	0.33		0.47
15	7.23	5.97	6.55	6.58	0.40		0.51
25	10.94	7.70	9.87	9.50	2.73		1.35
40	16.44	12.63	14.83	14.63	3.66		1.56
60	24.30	19.50	20.25	21.35	6.67		2.11
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A48 STUDENT'S t TEST OF FORMULA 7 AND 79

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FOR 7 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.61	2.70	3.24	3.18	0.21	-0.02	0.37
10	5.11	4.73	5.08	4.97	0.04	-0.25	0.17
15	5.74	5.26	6.61	5.87	0.47	-1.08	0.56
25	7.16	6.85	8.13	7.38	0.45	-1.69	0.55
40	8.79	8.71	10.97	9.49	1.64	-3.16	1.05
60	12.77	11.07	13.62	12.49	1.69	-4.34	1.06
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 79 TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	3.56	2.88	3.13	3.19	0.12	0.28
10	5.73	4.62	4.90	5.08	0.33	0.47
15	7.23	5.97	6.55	6.58	0.40	0.51
25	10.94	7.70	9.87	9.50	2.73	1.35
40	16.44	12.63	14.83	14.63	3.66	1.56
60	24.30	19.50	20.25	21.35	6.67	2.11
90				0.00	0.00	ERR
120				0.00	0.00	ERR
180				0.00	0.00	ERR
240				0.00	0.00	ERR
300				0.00	0.00	ERR
360				0.00	0.00	ERR

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## APPENDIX A49 STUDENT'S t TEST OF FORMULA 59 AND PRODUCT A

FOR 59							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	6.41	6.45	6.44	6.43	0.00	20.66	0.02
10	10.52	10.74	10.76	10.67	0.02	30.27	0.11
15	14.64	14.49	14.75	14.63	0.02	32.42	0.11
25	22.86	21.92	21.74	22.17	0.36	9.14	0.49
40	31.26	31.70	30.27	31.08	0.54	6.57	0.60
60	45.94	44.73	46.55	45.74	0.86	7.86	0.76
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

PRODUCT A							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	4.00	4.26	4.27	4.18	0.02		0.12
10	6.82	6.65	6.89	6.79	0.02		0.10
15	9.59	9.22	9.44	9.42	0.03		0.15
25	14.81	12.62	14.22	13.88	1.28		0.93
40	23.00	19.24	21.99	21.41	3.79		1.59
60	32.19	27.61	31.91	30.57	6.59		2.10
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A50 STUDENT'S t TEST OF FORMULA 89 AND PRODUCT A

FOR 89							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.63	2.84	3.49	3.32	0.18	-2.70	0.34
10	5.14	3.82	4.84	4.60	0.48	-4.40	0.56
15	6.70	5.02	6.49	6.07	0.84	-5.07	0.75
25	10.24	7.59	10.92	9.58	3.10	-2.91	1.44
40	16.84	13.79	17.03	15.89	3.31	-2.93	1.48
60	26.10	21.42	24.34	23.95	5.59	-2.68	1.93
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

PRODUCT A							
TIME	S1	S2	S3	MEAN	VARAINCE		
5	4.00	4.26	4.27	4.18	0.02		0.12
10	6.82	6.65	6.89	6.79	0.02		0.10
15	9.59	9.22	9.44	9.42	0.03		0.15
25	14.81	12.62	14.22	13.88	1.28		0.93
40	23.00	19.24	21.99	21.41	3.79		1.59
60	32.19	27.61	31.91	30.57	6.59		2.10
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A51 STUDENT'S t TEST OF FORMULA 62 AND 89

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FOR 89							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.63	2.84	3.49	3.32	0.18	1.97	0.34
10	5.14	3.82	4.84	4.60	0.48	0.78	0.56
15	6.70	5.02	6.49	6.07	0.84	0.56	0.75
25	10.24	7.59	10.92	9.58	3.10	0.74	1.44
40	16.84	13.79	17.03	15.89	3.31	1.02	1.48
60	26.10	21.42	24.34	23.95	5.59	0.70	1.93
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 62						
TIME	S1	S2	S3	MEAN	VARAINCE	
5	2.86	2.65	2.59	2.70	0.02	0.12
10	4.31	3.97	4.33	4.20	0.04	0.17
15	5.84	5.57	5.71	5.71	0.02	0.11
25	9.35	8.41	8.04	8.60	0.46	0.55
40	15.58	13.45	14.03	14.35	1.21	0.90
60	23.85	21.07	22.83	22.58	1.98	1.15
90				0.00	0.00	ERR
120				0.00	0.00	ERR
180				0.00	0.00	ERR
240				0.00	0.00	ERR
300				0.00	0.00	ERR
360				0.00	0.00	ERR

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## APPENDIX A52 STUDENT'S t TEST OF FORMULA 17 AND 62

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FOR 17							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.12	2.80	2.40	2.77	0.13	0.27	0.29
10	4.73	4.65	3.99	4.46	0.16	0.79	0.33
15	5.80	5.64	5.39	5.61	0.04	-0.55	0.17
25	7.81	7.59	7.49	7.63	0.03	-1.97	0.13
40	9.55	10.20	9.81	9.85	0.11	-5.54	0.27
60	11.75	12.07	12.64	12.15	0.20	-9.99	0.37
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

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FOR 62							
TIME	S1	S2	S3	MEAN	VARAINCE		
5	2.86	2.65	2.59	2.70	0.02		0.12
10	4.31	3.97	4.33	4.20	0.04		0.17
15	5.84	5.57	5.71	5.71	0.02		0.11
25	9.35	8.41	8.04	8.60	0.46		0.55
40	15.58	13.45	14.03	14.35	1.21		0.90
60	23.85	21.07	22.83	22.58	1.98		1.15
90				0.00	0.00		ERR
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

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## APPENDIX A53 STUDENT'S t TEST OF FORMULA 7 AND 17

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FOR 7 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.61	2.70	3.24	3.18	0.21	1.00	0.37
10	5.11	4.73	5.08	4.97	0.04	1.60	0.17
15	5.74	5.26	6.61	5.87	0.47	0.51	0.56
25	7.16	6.85	8.13	7.38	0.45	-0.51	0.55
40	8.79	8.71	10.97	9.49	1.64	-0.39	1.05
60	12.77	11.07	13.62	12.49	1.69	0.34	1.06
90				0.00	0.00	ERR	
120				0.00	0.00	ERR	
180				0.00	0.00	ERR	
240				0.00	0.00	ERR	
300				0.00	0.00	ERR	
360				0.00	0.00	ERR	

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FOR 17 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.12	2.80	2.40	2.77	0.13		0.29
10	4.73	4.65	3.99	4.46	0.16		0.33
15	5.80	5.64	5.39	5.61	0.04		0.17
25	7.81	7.59	7.49	7.63	0.03		0.13
40	9.55	10.20	9.81	9.85	0.11		0.27
60	11.75	12.07	12.64	12.15	0.20		0.37
90				0.00	0.00		
120				0.00	0.00		
180				0.00	0.00		
240				0.00	0.00		
300				0.00	0.00		
360				0.00	0.00		

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## APPENDIX A 54 STUDENT'S t TEST OF FORMULA 8 AND 18

FOR 8 TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.96	2.53	1.98	2.49	0.24	2.27	0.40
10	4.01	3.50	3.23	3.58	0.16	1.80	0.32
15	5.05	4.42	4.21	4.56	0.19	2.32	0.36
25	5.59	3.51	5.33	4.81	1.28	0.10	0.93
40	6.45	6.55	6.08	6.36	0.06	1.36	0.20
60	7.29	7.49	7.97	7.58	0.12	0.64	0.29
90				0.00	0.00	ERR	ERR
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 18 TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	1.87	1.54	1.50	1.64	0.04	0.17
10	3.34	2.55	2.49	2.79	0.23	0.39
15	4.03	3.41	3.16	3.53	0.20	0.37
25	5.34	4.37	4.45	4.72	0.29	0.44
40	6.43	5.31	5.43	5.72	0.38	0.50
60	8.22	6.40	6.72	7.11	0.94	0.79
90				0.00	0.00	ERR
120				0.00	0.00	ERR
180				0.00	0.00	ERR
240				0.00	0.00	ERR
300				0.00	0.00	ERR
360				0.00	0.00	ERR

## APPENDIX A55 STUDENT'S t TEST OF FOR FORMULA 9 AND 19

FOR 9							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	1.63	1.57	1.36	1.52	0.02	-2.29	0.12
10	2.61	2.50	2.34	2.48	0.02	-3.85	0.11
15	3.39	3.23	3.05	3.22	0.03	-4.01	0.14
25	4.93	4.35	4.58	4.62	0.09	-4.64	0.24
40	6.12	5.85	6.40	6.12	0.08	-5.23	0.22
60	7.91	7.44	7.58	7.64	0.06	-10.80	0.20
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 19							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.72	2.22	1.85	2.26	0.19		0.36
10	4.03	3.51	3.27	3.60	0.15		0.32
15	5.02	4.37	4.21	4.53	0.18		0.35
25	6.58	6.03	5.88	6.16	0.14		0.30
40	8.01	7.43	7.53	7.66	0.10		0.25
60	9.72	9.53	9.62	9.62	0.01		0.08
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A56 STUDENT'S t TEST OF FORMULA 10 AND 20

FOR 10							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	1.22	0.89	0.85	0.99	0.04	-3.41	0.17
10	1.94	1.52	1.63	1.70	0.05	-4.49	0.18
15	2.56	2.19	2.14	2.30	0.05	-5.89	0.19
25	3.46	3.21	3.42	3.36	0.02	-8.46	0.11
40	4.83	4.62	4.92	4.79	0.02	-4.00	0.13
60	6.39	6.04	6.70	6.38	0.11	-2.72	0.27
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

  

FOR 20						
TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	1.67	1.43	1.57	1.56	0.01	0.10
10	2.79	2.41	2.71	2.64	0.04	0.16
15	3.50	3.25	3.43	3.39	0.02	0.11
25	4.73	4.46	4.77	4.65	0.03	0.14
40	6.13	5.52	6.23	5.96	0.15	0.31
60	7.52	6.95	7.80	7.42	0.19	0.35
120				0.00	0.00	ERR
180				0.00	0.00	ERR
240				0.00	0.00	ERR
300				0.00	0.00	ERR
360				0.00	0.00	ERR

## APPENDIX A57 STUDENT'S t TEST OF FORMULA 53 AND 59

FOR 53							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	8.87	7.84	8.46	8.39	0.27	5.33	0.42
10	15.55	13.48	13.85	14.29	1.22	4.60	0.90
15	22.02	19.79	18.88	20.23	2.61	4.89	1.32
25	32.55	27.44	26.04	28.68	11.74	2.64	2.80
40	45.62	41.61	40.38	42.54	7.51	5.71	2.24
60	62.51	56.61	53.12	57.41	22.53	3.41	3.88
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 59							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	6.41	6.45	6.44	6.43	0.00		0.02
10	10.52	10.74	10.76	10.67	0.02		0.11
15	14.64	14.49	14.75	14.63	0.02		0.11
25	22.86	21.92	21.74	22.17	0.36		0.49
40	31.26	31.70	30.27	31.08	0.54		0.60
60	45.94	44.73	46.55	45.74	0.86		0.76
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

APPENDIX A58 STUDENT'S  $t$  TEST OF FORMULA 54 AND 60

FOR 54							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	6.77	7.36	7.75	7.29	0.24	3.77	0.40
10	11.82	12.81	13.06	12.56	0.43	5.37	0.54
15	16.33	17.71	17.63	17.22	0.60	3.38	0.63
25	24.04	25.45	25.69	25.06	0.79	4.27	0.73
40	34.60	36.47	35.37	35.48	0.88	4.12	0.77
60	47.33	49.73	48.40	48.49	1.45	6.36	0.98
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 60							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	5.93	5.66	6.04	5.88	0.04		0.16
10	10.11	9.75	10.05	9.97	0.04		0.16
15	14.68	14.16	15.49	14.78	0.45		0.55
25	19.69	21.70	21.26	20.88	1.12		0.86
40	28.56	29.26	31.76	29.86	2.83		1.37
60	40.20	41.11	42.35	41.22	1.16		0.88
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A59 STUDENT'S t TEST OF FORMULA 57 AND 62

FOR 57							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.84	3.71	3.07	3.54	0.17	2.73	0.34
10	5.88	5.66	4.59	5.38	0.48	2.31	0.56
15	7.87	7.13	6.64	7.21	0.38	3.36	0.51
25	11.18	9.72	10.60	10.50	0.54	2.69	0.60
40	16.76	15.23	17.22	16.40	1.09	1.91	0.85
60	24.19	22.82	25.49	24.17	1.78	1.15	1.09
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 62							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.86	2.65	2.59	2.70	0.02		0.12
10	4.31	3.97	4.33	4.20	0.04		0.17
15	5.84	5.57	5.71	5.71	0.02		0.11
25	9.35	8.41	8.04	8.60	0.46		0.55
40	15.58	13.45	14.03	14.35	1.21		0.90
60	23.85	21.07	22.83	22.58	1.98		1.15
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A60 STUDENT'S t TEST OF FORMULA 58 AND 63

FOR 58							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.31	2.89	2.56	2.92	0.14	1.21	0.31
10	4.87	4.07	4.01	4.32	0.23	0.93	0.39
15	6.36	4.91	5.04	5.44	0.64	0.58	0.66
25	8.75	6.99	7.03	7.59	1.01	0.97	0.82
40	14.20	10.71	11.76	12.22	3.21	0.56	1.46
60	20.94	16.45	16.66	18.02	6.42	-0.01	2.07
120				0.00	0.00	ERR	ERR
180				0.00	0.00	ERR	ERR
240				0.00	0.00	ERR	ERR
300				0.00	0.00	ERR	ERR
360				0.00	0.00	ERR	ERR

FOR 63							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	2.91	2.02	2.32	2.42	0.21		0.37
10	4.22	4.01	3.58	3.94	0.11		0.27
15	5.47	5.08	4.65	5.07	0.17		0.33
25	7.30	6.91	6.20	6.80	0.31		0.46
40	12.42	11.12	10.76	11.43	0.76		0.71
60	20.15	16.97	17.00	18.04	3.34		1.49
120				0.00	0.00		ERR
180				0.00	0.00		ERR
240				0.00	0.00		ERR
300				0.00	0.00		ERR
360				0.00	0.00		ERR

## APPENDIX A61 STUDENT'S t TEST OF FOR 79 AND 89

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FOR 79

TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.56	2.88	3.13	3.19	0.12	-0.34	0.28
10	5.73	4.62	4.90	5.08	0.33	0.76	0.47
15	7.23	5.97	6.55	6.58	0.40	0.65	0.51
25	10.94	7.70	9.87	9.50	2.73	-0.05	1.35
40	16.44	12.63	14.83	14.63	3.66	-0.67	1.56
60	24.30	19.50	20.25	21.35	6.67	-1.05	2.11
90	32.42	27.85	27.06	29.11	8.37	-1.60	2.36
120	41.22	35.56	34.00	36.93	14.43	-0.73	3.10
180	52.40	47.55	47.39	49.11	8.11	-0.99	2.32
240	62.13	60.31	54.27	58.90	16.93	-0.80	3.36
300	68.92	69.29	62.13	66.78	16.25	-0.55	3.29
360	74.95	76.02	68.21	73.06	17.93	-0.08	3.46

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FOR 89

TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	3.63	2.84	3.49	3.32	0.18	0.34
10	5.14	3.82	4.84	4.60	0.48	0.56
15	6.70	5.02	6.49	6.07	0.84	0.75
25	10.24	7.59	10.92	9.58	3.10	1.44
40	16.84	13.79	17.03	15.89	3.31	1.48
60	26.10	21.42	24.34	23.95	5.59	1.93
90	35.90	30.56	34.38	33.61	7.57	2.25
120	45.63	33.80	42.48	40.64	37.54	5.00
180	57.90	47.96	53.53	53.13	24.82	4.07
240	68.85	55.72	65.67	63.41	46.92	5.59
300	76.31	62.25	71.26	69.94	50.73	5.82
360	78.70	67.53	74.11	73.45	31.52	4.58



## APPENDIX A62 STUDENT'S t TEST OF FORMULA 80 AND 90

FOR 80							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.45	4.25	2.23	3.31	1.03	0.09	0.83
10	4.89	5.53	3.06	4.49	1.64	-0.80	1.05
15	6.49	6.62	4.07	5.73	2.06	-1.71	1.17
25	9.99	8.62	6.31	8.31	3.46	-2.25	1.52
40	16.70	11.69	10.53	12.97	10.75	-2.18	2.68
60	25.23	16.19	16.23	19.22	27.12	-1.76	4.25
90	34.56	22.91	24.27	27.25	40.58	-1.47	5.20
120	43.60	29.92	31.10	34.87	57.46	-1.01	6.19
180	45.90	39.75	44.14	43.26	10.03	-2.75	2.59
240	55.64	50.01	52.74	52.80	7.93	-2.51	2.30
300	61.89	58.08	61.43	60.47	4.33	-2.55	1.70
360	66.02	64.14	69.04	66.40	6.11	-1.41	2.02

FOR 90							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.24	3.06	3.43	3.24	0.03		0.15
10	5.02	4.92	5.90	5.28	0.29		0.44
15	7.39	7.23	7.97	7.53	0.15		0.32
25	11.22	11.00	11.81	11.34	0.18		0.34
40	18.49	17.83	17.87	18.06	0.14		0.30
60	26.64	25.86	24.91	25.80	0.75		0.71
90	35.56	33.23	33.22	34.00	1.82		1.10
120	40.90	39.89	40.12	40.30	0.28		0.43
180	53.70	50.56	48.87	51.04	6.01		2.00
240	62.13	58.90	57.28	59.44	6.10		2.02
300	67.62	63.77	65.37	65.59	3.74		1.58
360	75.24	70.31	67.50	71.02	15.35		3.20

## APPENDIX A63 STUDENT'S t TEST OF FORMULA 81 AND 91

FOR 81							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	3.97	2.51	3.73	3.40	0.61	-0.14	0.64
10	5.87	3.69	5.67	5.08	1.45	0.63	0.98
15	8.06	5.25	7.77	7.03	2.39	1.31	1.26
25	11.22	7.97	11.16	10.12	3.46	1.77	1.52
40	16.46	12.46	16.30	15.07	5.13	1.65	1.85
60	22.60	18.48	22.27	21.12	5.24	1.30	1.87
90	29.78	25.28	29.31	28.12	6.12	1.00	2.02
120	35.50	31.72	35.82	34.35	5.20	0.80	1.86
180	43.50	41.74	43.77	43.00	1.22	0.48	0.90
240	50.11	49.63	49.78	49.84	0.06	0.15	0.20
300	57.11	57.98	55.63	56.91	1.41	0.53	0.97
360	60.30	64.05	59.27	61.21	6.33	-0.03	2.05

FOR 91							
TIME	S1	S2	S3	MEAN	VARAINCE		
5	3.36	3.78	3.32	3.49	0.06		0.21
10	4.81	4.50	4.27	4.53	0.07		0.22
15	5.96	5.52	5.15	5.54	0.16		0.33
25	8.42	7.55	6.65	7.54	0.78		0.72
40	13.49	11.73	10.43	11.88	2.36		1.25
60	20.62	17.74	15.31	17.89	7.07		2.17
90	28.10	25.84	22.39	25.44	8.27		2.35
120	35.53	31.62	29.21	32.12	10.17		2.60
180	45.46	40.62	39.47	41.85	10.10		2.60
240	53.81	47.45	47.02	49.43	14.46		3.10
300	59.90	53.37	52.84	55.37	15.46		3.21
360	66.06	60.40	57.49	61.32	18.99		3.56

## APPENDIX A64 STUDENT'S t TEST OF PRODUCTS A AND B

FOR PRODUCT A							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	4.00	4.26	4.27	4.18	0.02	-0.05	0.12
10	6.82	6.65	6.89	6.79	0.02	-0.14	0.10
15	9.59	9.22	9.44	9.42	0.03	0.00	0.15
25	14.81	12.62	14.22	13.88	1.28	-0.03	0.93
40	23.00	19.24	21.99	21.41	3.79	0.10	1.59
60	32.19	27.61	31.91	30.57	6.59	-0.12	2.10
90	46.68	39.24	44.09	43.34	14.26	-0.19	3.08
120	55.27	50.22	55.87	53.79	9.63	-0.33	2.53
180	76.40	66.10	71.65	71.38	26.58	-0.40	4.21
240	88.04	83.88	81.72	84.55	10.32	-0.17	2.62
300	85.02	84.23	86.10	85.12	0.88	-0.91	0.77
360	90.59	86.01	90.98	89.19	7.64	-2.51	2.26

FOR PRODUCT B						
TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	4.66	3.87	4.05	4.19	0.17	0.34
10	7.81	6.14	6.66	6.87	0.73	0.70
15	11.24	8.41	8.60	9.42	2.50	1.29
25	16.14	12.82	12.82	13.93	3.67	1.57
40	24.98	19.20	19.19	21.12	11.16	2.73
60	35.30	28.58	29.02	30.97	14.13	3.07
90	51.82	42.37	38.98	44.39	44.28	5.43
120	66.36	53.35	48.44	56.05	85.75	7.56
180	84.44	71.75	66.91	74.37	81.96	7.39
240	95.65	81.81	79.45	85.64	76.59	7.15
300	95.62	87.62	83.83	89.02	36.23	4.91
360	97.88	96.43	93.05	95.79	6.14	2.02

## APPENDIX A65 STUDENT'S t TEST OF PRODUCTS A AND C

FOR PRODUCT A							
TIME	S1	S2	S3	MEAN	VARAINCE	T-VALUE	S.D.
5	4.00	4.26	4.27	4.18	0.02	-3.86	0.12
10	6.82	6.65	6.89	6.79	0.02	-3.09	0.10
15	9.59	9.22	9.44	9.42	0.03	-2.11	0.15
25	14.81	12.62	14.22	13.88	1.28	-2.12	0.93
40	23.00	19.24	21.99	21.41	3.79	-1.43	1.59
60	32.19	27.61	31.91	30.57	6.59	-1.55	2.10
90	46.68	39.24	44.09	43.34	14.26	-1.22	3.08
120	55.27	50.22	55.87	53.79	9.63	-1.25	2.53
180	76.40	66.10	71.65	71.38	26.58	-0.78	4.21
240	88.04	83.88	81.72	84.55	10.32	0.38	2.62
300	85.02	84.23	86.10	85.12	0.88	-2.09	0.77
360	90.59	86.01	90.98	89.19	7.64	-1.51	2.26

FOR PRODUCT C						
TIME	S1	S2	S3	MEAN	VARAINCE	S.D.
5	5.76	6.46	5.29	5.84	0.35	0.48
10	9.15	11.09	8.64	9.63	1.67	1.06
15	12.50	15.02	10.63	12.72	4.85	1.80
25	17.59	20.50	15.66	17.92	5.94	1.99
40	26.38	29.81	21.71	25.97	16.53	3.32
60	37.51	39.98	31.26	36.25	20.20	3.67
90	49.56	56.64	43.45	49.88	43.57	5.39
120	59.93	70.34	54.28	61.52	66.37	6.65
180	74.05	83.65	70.53	76.08	46.11	5.54
240	82.00	87.46	80.24	83.23	14.17	3.07
300	89.24	95.18	88.19	90.87	14.21	3.08
360	94.84	94.70	90.22	93.25	6.91	2.15

## Vita.

Mr. Soodkate Duangchana was born on April 5, 1968. He got his degree in Bachelor of Science in Pharmacy with the second class honors in 1990 from Faculty of Pharmacy, Mahidol University. He has been a lecturer at Faculty of Pharmaceutical Science, Khon Kaen University since October, 1992.

