

(ملحق 1)

ملخص

Blood Glucose 2th Sample PP (mg / dl)	Blood Glucose 2th Sample F (mg / dl)	Blood Glucose 1st Sample PP (mg / dl)	Blood Glucose 1st Sample F (mg / dl)	Drug (per day)	Onset	Sex	Age	Dose	
250	175	293	197	oral hypo.	240	M	72	hon	1
237	178	282	188	non	.	F	54	hon	2
365	316	461	308	insulin	180	M	19	hon	3
270	237	267	220	non	72	F	32	hon	4
472	447	371	286	insulin	120	F	20	hon	5
251	184	229	177	non	48	F	58	hon	6
359	304	413	329	oral hypo.	120	F	53	hon	7
229	181	278	170	oral hypo.	216	M	67	hon	8
173	114	153	118	non	18	M	47	hon	9
314	266	379	263	oral hypo.	216	M	53	hon	10
393	223	354	209	non	1	M	55	hon	11
502	372	436	281	oral hypo.	24	M	34	mix	12
396	286	412	283	non	18	M	52	mix	13
162	93	166	109	oral hypo.	12	F	50	mix	14
162	138	89	109	oral hypo.	96	M	52	mix	15
196	130	166	117	non	24	M	42	mix	16
248	190	300	190	oral hypo.	264	M	57	mix	17
376	217	352	206	oral hypo.	60	F	44	mix	18
282	177	277	188	non	54	M	56	mix	19
365	271	399	312	oral hypo.	48	F	45	mix	20
334	234	399	294	oral hypo.	240	M	46	mix	21
133	129	166	120	non	3	F	42	mix	22
247	162	236	116	oral hypo.	144	M	58	mix	23

313	173	210	128	oral hypo.	180	F	65	mix	24
401	204	368	224	oral hypo.	240	F	75	mix	25
378	288	406	306	oral hypo.	36	F	56	mix	26
195	177	263	174	oral hypo.	36	M	36	mix	27
334	248	358	319	insulin	36	F	24	mix	28
362	279	350	248	oral hypo.	120	F	60	mix	29
392	209	443	321	insulin	60	F	10	mix	30
130	114	210	140	oral hypo.	60	M	52	mix	31
245	161	234	159	non	.	M	.	mix	32
182	163	162	134	non	18	M	40	mix	33
224	115	146	140	non	.	F	.	mix	34
326	261	224	192	oral hypo.	24	F	39	propolis	35
156	120	129	113	non	12	M	47	propolis	36
318	246	374	245	non	72	F	43	propolis	37
212	200	257	204	oral hypo.	120	F	65	propolis	38
200	133	201	120	oral hypo.	24	F	45	propolis	39
394	287	280	249	oral hypo.	60	F	55	propolis	40
422	414	435	354	oral hypo.	120	F	48	propolis	41
261	187	237	224	oral hypo.	120	M	65	propolis	42
207	182	204	161	non	18	F	43	propolis	43
391	115	212	86	insulin	384	M	63	propolis	44
127	125	122	116	oral hypo.	24	F	50	propolis	45
268	229	254	215	oral hypo.	84	M	52	propolis	46
319	258	374	247	oral hypo.	84	M	50	propolis	47
364	275	420	341	oral hypo.	192	M	51	propolis	48
280	212	324	236	oral hypo.	192	M	61	propolis	49
383	341	373	259	insulin	18	M	21	propolis	50
311	241	252	194	insulin	144	M	42	propolis	51
297	234	323	237	oral hypo.	36	M	73	propolis	52
307	214	279	177	oral hypo.	144	M	53	propolis	53
302	239	408	297	insulin	18	F	43	propolis	54

170	132	177	130	non	12	F	38	propolis	55
270	138	250	180	oral hypo.	168	M	53	propolis	56
383	358	401	309	oral hypo.	.	F	51	propolis	57
334	297	365	277	non	18	F	30	propolis	58
372	254	186	207	non	.	F	.	propolis	59
306	264	425	339	insulin	204	M	52	propolis	60
258	280	277	231	oral hypo.	3	M	42	propolis	61
219	248	262	196	insulin	240	M	68	propolis	62
243	213	350	206	oral hypo.	24	F	44	RJ	63
124	112	143	126	non	12	F	53	RJ	64
124	84	193	160	oral hypo.	12	F	45	RJ	65
230	207	286	233	insulin	120	F	50	RJ	66
176	145	116	152	oral hypo.	96	M	46	RJ	67
185	128	125	100	oral hypo.	8	F	43	RJ	68
385	266	174	84	insulin	24	F	45	RJ	69
436	261	489	280	non	84	M	35	RJ	70
196	130	207	150	oral hypo.	252	M	57	RJ	71
382	213	418	261	oral hypo.	120	F	56	RJ	72
411	269	460	298	oral hypo.	216	F	50	RJ	73
192	124	198	140	oral hypo.	60	F	51	RJ	74
293	232	283	206	oral hypo.	12	F	70	RJ	75
260	208	233	198	oral hypo.	240	M	58	RJ	76
182	126	217	135	oral hypo.	120	M	51	RJ	77
201	169	252	189	non	84	F	85	RJ	78
209	199	306	231	oral hypo.	480	M	62	RJ	79
307	257	226	247	oral hypo.	264	F	45	RJ	80
354	217	366	246	non	2	M	32	RJ	81
244	212	324	208	oral hypo.	48	M	48	RJ	82
247	155	283	148	oral hypo.	11	M	34	RJ	83
240	185	260	203	non	63	F	.	RJ	84
361	263	336	245	oral hypo.	156	F	37	RJ	85

388	279	434	295	oral hypo.	96	M	45	RJ	86
293	109	334	168	insulin	216	M	57	RJ	87
313	237	250	179	oral hypo.	84	M	49	RJ	88
248	153	243	161	oral hypo.	144	M	57	RJ	89
89	89	89	89	89	84	89	85	89	N Total
283.74	211.15	287.18	207.51	.89	102.23	1.48	49.11	2.29	Mean
87.927	72.360	96.816	68.256	.630	94.452	.503	12.852	.991	Std. Deviation

a Limited to first 100 cases.

ملحق (2):

Non-linear Regression Mitcherlich:

All the derivatives will be calculated numerically.

Iteration	Residual SS	B0	B1	B2	B3
1	997610.1886	.1000000000	.1000000000	.1000000000	.
1000000000					
1.1	7297689.417	8.62379974	-8.9591684	-79.613486	
-95.694059					
1.2	1016299.311	1.00445603	-.86182501	-8.3776976	
-10.032720					
1.3	996300.6344	.284633246	-.09635484	-1.6309757	
-1.9678712					
2	996300.6344	.284633246	-.09635484	-1.6309757	
-1.9678712					
2.1	994476.9889	.482267660	-.05486300	.154465055	.
165322122					
3	994476.9889	.482267660	-.05486300	.154465055	.
165322122					
3.1	989681.3734	.916446137	-.17047377	2.38776849	
2.83435156					
4	989681.3734	.916446137	-.17047377	2.38776849	
2.83435156					
4.1	975431.9745	1.55990151	-.47098769	5.91752744	
7.05456351					
5	975431.9745	1.55990151	-.47098769	5.91752744	
7.05456351					
5.1	953930.5887	2.88483039	-.70450399	8.53005012	
10.1808206					
6	953930.5887	2.88483039	-.70450399	8.53005012	
10.1808206					
6.1	913733.4720	5.50897418	-1.0136617	11.9501078	
14.2806332					
7	913733.4720	5.50897418	-1.0136617	11.9501078	
14.2806332					
7.1	841393.2844	10.5919448	-1.4240209	16.4480380	
19.6922616					
8	841393.2844	10.5919448	-1.4240209	16.4480380	
19.6922616					
8.1	721921.5656	20.0699630	-1.9487195	22.1332506	
26.5858017					
9	721921.5656	20.0699630	-1.9487195	22.1332506	
26.5858017					
9.1	522677.3710	40.0942160	-2.6776765	29.8391920	
36.1394616					
10	522677.3710	40.0942160	-2.6776765	29.8391920	
36.1394616					
10.1	269095.8601	87.2378000	-3.4747284	37.2971906	
46.6373990					
11	269095.8601	87.2378000	-3.4747284	37.2971906	
46.6373990					
11.1	89953.63847	192.203119	-3.0523264	27.8095517	
42.0312169					
12	89953.63847	192.203119	-3.0523264	27.8095517	
42.0312169					

12.1	641624.3205	264.458017	-7.2086501	-38.564088
-41.221027				
12.2	75075.92417	211.589018	-2.8508193	23.9960596
39.6151388				
13	75075.92417	211.589018	-2.8508193	23.9960596
39.6151388				
13.1	58329.81098	246.118872	-2.3121212	13.6395217
33.1849089				
14	58329.81098	246.118872	-2.3121212	13.6395217
33.1849089				
14.1	71116.78713	267.693379	-3.9732866	-12.117680
-4.1025816				
14.2	55524.73812	256.696315	-2.0671033	7.73039806
30.0519581				
15	55524.73812	256.696315	-2.0671033	7.73039806
30.0519581				
15.1	54358.23848	270.563532	-1.1031354	-.37653790
34.7050503				
16	54358.23848	270.563532	-1.1031354	-.37653790
34.7050503				
16.1	58965.93463	271.631564	-.03510182	-8.7934938
71.4036815				
16.2	54132.59015	269.606961	-1.2136872	-4.2835992
35.6251518				
17	54132.59015	269.606961	-1.2136872	-4.2835992
35.6251518				
17.1	54128.68109	270.184487	-1.4821792	-5.5212255
27.6708667				
18	54128.68109	270.184487	-1.4821792	-5.5212255
27.6708667				
18.1	54115.68002	269.969225	-1.6974417	-4.3499320
25.2382487				
19	54115.68002	269.969225	-1.6974417	-4.3499320
25.2382487				
19.1	54131.75206	269.553710	-2.1129568	-3.1888663
19.6134868				
19.2	54114.66792	269.919068	-1.7475983	-4.3403890
24.8305437				
20	54114.66792	269.919068	-1.7475983	-4.3403890
24.8305437				
20.1	54114.69901	270.004859	-1.6618076	-4.6028260
26.0121017				
20.2	54114.66667	269.927354	-1.7393131	-4.3659810
24.9552227				
21	54114.66667	269.927354	-1.7393131	-4.3659810
24.9552227				
21.1	54114.66671	269.911149	-1.7555172	-4.3161114
24.7326407				

Run stopped after 49 model evaluations and 21 derivative evaluations.
Iterations have been stopped because the relative reduction between successive

residual sums of squares is at most SSCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
Regression	4	943806.33333	235951.58333
Residual	8	54114.66667	6764.33333
Uncorrected Total	12	997921.00000	
(Corrected Total)	11	58800.25000	

R squared = 1 - Residual SS / Corrected SS = .07969

Asymptotic 95 %

Parameter	Estimate	Asymptotic Std. Error	Confidence Lower	Interval Upper
B0	269.92735352	2.79806E+16	-6.45234E+16	6.45234E+16
B1	-1.739313142	2.79806E+16	-6.45233E+16	6.45233E+16
B2	-4.365981013	8.63233E+16	-1.99062E+17	1.99062E+17
B3	24.955222712	3.85371E+17	-8.88667E+17	8.88667E+17

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	1.0000	-1.0000	1.0000
B1	1.0000	1.0000	-1.0000	1.0000
B2	-1.0000	-1.0000	1.0000	-1.0000
B3	1.0000	1.0000	-1.0000	1.0000

ملحق (3)

:Non-linear Regression Chapman Richards:

All the derivatives will be calculated numerically.

Iteration	Residual SS	B0	B1	B2	B3
1	983155.5848	.1000000000	.1000000000	.1000000000	.
1.1	940137.1176	5.67059009	-46.094617	527.835860	
-437.90847					
2	940137.1176	5.67059009	-46.094617	527.835860	
-437.90847					
2.1	875823.9189	14.2710330	-46.246952	527.835860	
-432.24943					
3	875823.9189	14.2710330	-46.246952	527.835860	
-432.24943					
3.1	762582.7423	30.2547696	-46.965134	527.835860	
-405.11118					
4	762582.7423	30.2547696	-46.965134	527.835860	
-405.11118					
4.1	560086.1365	62.1776121	-50.147335	527.835860	
-274.36952					
5	560086.1365	62.1776121	-50.147335	527.835860	
-274.36952					
5.1	268420.1599	124.554085	-67.448172	527.835860	
862.023493					
6	268420.1599	124.554085	-67.448172	527.835860	
862.023493					
6.1	45600.70975	245.300713	-216.77336	527.835860	
-3646.7354					
7	45600.70975	245.300713	-216.77336	527.835860	
-3646.7354					
7.1	6520.659412	243.759405	557.596910	527.835860	
-26015.163					
8	6520.659412	243.759405	557.596910	527.835860	
-26015.163					
8.1	5680.750000	258.250000	557.596910	527.835860	
-26015.163					
9	5680.750000	258.250000	557.596910	527.835860	
-26015.163					
Source	DF	Sum of Squares	Mean Square		
Regression	4	266772.25000	66693.06250		
Residual	12	5680.75000	473.39583		
Uncorrected Total	16	272453.00000			

(Corrected Total) 15 5680.75000

R squared = 1 - Residual SS / Corrected SS = .00000

		Asymptotic 95 % Confidence Interval		
Parameter	Estimate	Std. Error	Lower	Upper
B0	258.25000000	10.878830743	234.54706401	281.95293599
B1	557.59691046	.0000000000	557.59691046	557.59691046
B2	527.83586032	.0000000000	527.83586032	527.83586032
B3	-26015.16311	.0000000000	-26015.16311	-26015.16311
Asymptotic Correlation Matrix of the Parameter Estimates				
	B0	B1	B2	B3
B0	1.0000	.	.	.
B1	.	1.0000	.	.
B2	.	.	1.0000	.
B3	.	.	.	1.0000

Non-linear Regression Von Bertalanffy:

All the derivatives will be calculated numerically. Iteration

Residual SS	B0	B1	B2	B3
1	983698.4710	.1000000000	.1000000000	.1000000000
1000000000				
1.1	963391.5697	7.45605165	-8.4273561	94.6062469
46.7227334				
2	963391.5697	7.45605165	-8.4273561	94.6062469
46.7227334				
2.1	958515.4351	9.89935046	-8.3555819	222.695532
29.9316630				
3	958515.4351	9.89935046	-8.3555819	222.695532
29.9316630				
3.1	952034.4656	13.1765767	-8.3065401	222.695532
30.8332576				
4	952034.4656	13.1765767	-8.3065401	222.695532
30.8332576				
4.1	939658.1859	19.5609949	-8.2106187	222.695532
32.5286524				
5	939658.1859	19.5609949	-8.2106187	222.695532
32.5286524				
5.1	917063.2762	31.6835211	-8.0261727	222.695532
35.5610382				
6	917063.2762	31.6835211	-8.0261727	222.695532
35.5610382				
6.1	879229.9201	53.5898827	-7.6795886	222.695532
40.5875236				
7	879229.9201	53.5898827	-7.6795886	222.695532
40.5875236				
7.1	826556.8416	97.4036576	-6.8677817	222.695532
50.2139034				
8	826556.8416	97.4036576	-6.8677817	222.695532
50.2139034				
8.1	108848.2761	97.6514897	72.6151561	265.512121
41.2924460				
9	108848.2761	97.6514897	72.6151561	265.512121
41.2924460				
9.1	5680.750000	258.249998	72.6151561	265.512121
41.2924460				
10	5680.750000	258.249998	72.6151561	265.512121
41.2924460				
10.1	49498.51290	258.250025	72.6151561	265.512121
-26.636638				
10.2	5680.750000	258.250003	72.6151561	265.512121
34.4995376				

Run stopped after 21 model evaluations and 10 derivative evaluations.
Iterations have been stopped because the relative reduction between
successive
residual sums of squares is at most SSCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
Regression	4	266772.25000	66693.06250
Residual	12	5680.75000	473.39583
Uncorrected Total	16	272453.00000	
(Corrected Total)	15	5680.75000	

R squared = 1 - Residual SS / Corrected SS = .00000

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper
B0	258.24999843	3.97294E+17	-8.65630E+17	8.65630E+17
B1	72.615156058	.0000000000	72.615156058	72.615156058
B2	265.51212109	.0000000000	265.51212109	265.51212109
B3	41.292446010	1.07513E+24	-2.34252E+24	2.34252E+24

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	.	.	-1.0000
B1	.	1.0000	.	.
B2	.	.	1.0000	.
B3	-1.0000	.	.	1.0000

Non-linear Regression Mitcherlich:

All the derivatives will be calculated numerically.

Iteration	Residual SS	B0	B1	B2
B3				
1	1479973.421	.1000000000	.1000000000	.1000000000
1000000000				
1.1	10939728.86	8.86053420	-10.542797	-76.692351
-73.593055				
1.2	1494981.288	.945351420	-.92274643	-7.3524738
-7.0637254				
1.3	1477483.921	.331999230	-.18059730	-1.9461298
-1.8670967				
2	1477483.921	.331999230	-.18059730	-1.9461298
-1.8670967				
2.1	1473666.335	.614663757	-.14915533	-.56508905
-.53946650				
3	1473666.335	.614663757	-.14915533	-.56508905
-.53946650				
3.1	1465163.442	1.19974864	-.23215466	1.79391077
1.72805724				
4	1465163.442	1.19974864	-.23215466	1.79391077
1.72805724				
4.1	1438059.007	2.11432347	-.75593737	5.25169933
5.05117215				
5	1438059.007	2.11432347	-.75593737	5.25169933
5.05117215				
5.1	1398965.363	4.00758790	-1.1353977	7.41755167
7.13190391				
6	1398965.363	4.00758790	-1.1353977	7.41755167
7.13190391				
6.1	1327991.876	7.73887325	-1.6332817	10.1941431
9.79732773				
7	1327991.876	7.73887325	-1.6332817	10.1941431
9.79732773				
7.1	1206912.934	14.8611886	-2.2749917	13.7053373
13.1623908				
8	1206912.934	14.8611886	-2.2749917	13.7053373
13.1623908				
8.1	997819.7538	29.8330550	-3.1558934	18.4059008
17.6470276				
9	997819.7538	29.8330550	-3.1558934	18.4059008
17.6470276				
9.1	696379.5344	63.3506040	-4.1622646	23.4266235
22.3387537				
10	696379.5344	63.3506040	-4.1622646	23.4266235
22.3387537				
10.1	377488.8606	142.178837	-4.0818121	21.4964841
19.8662216				
11	377488.8606	142.178837	-4.0818121	21.4964841
19.8662216				
11.1	218240.0502	281.757909	-1.2163299	.917056507
-2.3170663				
12	218240.0502	281.757909	-1.2163299	.917056507
-2.3170663				
12.1	11820970.58	299.641186	12.8411673	-52.411440
-96.859682				
12.2	192862.5632	262.750463	-1.5681872	-7.5712838
-11.532530				

13	192862.5632	262.750463	-1.5681872	-7.5712838
-11.532530				
13.1	194604.3459	283.220153	-3.5798467	-28.688732
-29.091315				
13.2	181368.1396	269.712371	-3.0296958	-14.632893
-17.583814				
14	181368.1396	269.712371	-3.0296958	-14.632893
-17.583814				
14.1	194354.2307	285.955002	-.84499963	-31.331009
-36.297470				
14.2	179977.7998	275.899779	-3.2281936	-15.662972
-18.445400				
15	179977.7998	275.899779	-3.2281936	-15.662972
-18.445400				
15.1	179351.8486	283.793884	-3.0061155	-19.909675
-22.765117				
16	179351.8486	283.793884	-3.0061155	-19.909675
-22.765117				
16.1	180202.5637	284.888802	-1.9111973	-27.839339
-31.740212				
16.2	179342.8646	283.878715	-2.9212848	-20.813461
-23.754875				
17	179342.8646	283.878715	-2.9212848	-20.813461
-23.754875				
17.1	179344.2191	284.094182	-2.7058187	-22.448608
-25.609469				
17.2	179342.8001	283.898162	-2.9018379	-20.984917
-23.948408				
18	179342.8001	283.898162	-2.9018379	-20.984917
-23.948408				
18.1	179342.8023	283.941309	-2.8586906	-21.312959
-24.320662				
18.2	179342.8000	283.902384	-2.8976162	-21.018051
-23.986001				

Run stopped after 44 model evaluations and 18 derivative evaluations.
Iterations have been stopped because the relative reduction between successive

residual sums of squares is at most SCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
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Regression	4	1301024.20000	325256.05000
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Residual	16	179342.80000	11208.92500
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Uncorrected Total	20	1480367.00000	
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(Corrected Total)	19	202715.75000	
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R squared = 1 - Residual SS / Corrected SS = .11530

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper
B0	283.90238385	2.23961E+16	-4.74777E+16	4.74777E+16
B1	-2.897616151	2.23961E+16	-4.74777E+16	4.74777E+16
B2	-21.01805098	1.69678E+17	-3.59701E+17	3.59701E+17
B3	-23.98600143	1.92550E+17	-4.08187E+17	4.08187E+17

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	1.0000	-1.0000	-1.0000
B1	1.0000	1.0000	-1.0000	-1.0000

B2	-1.0000	-1.0000	1.0000	1.0000
B3	-1.0000	-1.0000	1.0000	1.0000

Non-linear Regression Chapman Richards:

All the derivatives will be calculated numerically.

Iteration	Residual SS	B0	B1	B2	B3
1	1966939.810	.1000000000	.1000000000	.1000000000	.
1.1	1895889.688	5.70109126	-46.459356	486.181275	1000000000
-441.31689					
2	1895889.688	5.70109126	-46.459356	486.181275	
-441.31689					
2.1	1789630.616	14.3295748	-46.615300	486.181275	
-435.51225					
3	1789630.616	14.3295748	-46.615300	486.181275	
-435.51225					
3.1	1600480.493	30.4655190	-47.355997	486.181275	
-407.45958					
4	1600480.493	30.4655190	-47.355997	486.181275	
-407.45958					
4.1	1258515.334	62.6896579	-50.671063	486.181275	
-270.65232					
5	1258515.334	62.6896579	-50.671063	486.181275	
-270.65232					
5.1	753853.3053	125.366449	-69.386290	486.181275	
991.481617					
6	753853.3053	125.366449	-69.386290	486.181275	
991.481617					
6.1	287020.4918	253.802701	-51.541786	486.181275	
1476.30472					
7	287020.4918	253.802701	-51.541786	486.181275	
1476.30472					

Nonlinear Regression Summary Statistics

Source	DF	Sum of Squares	Mean Square
Regression	4	405080.16667	101270.04167
Residual	20	58198.83333	2909.94167
Uncorrected Total	24	463279.00000	
(Corrected Total)	23	58198.83333	

R squared = 1 - Residual SS / Corrected SS = .00000

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper
B0	259.83333333	22.022494813	213.89521414	305.77145253
B1	2387.1667314	.0000000000	2387.1667314	2387.1667314
B2	486.18127494	.0000000000	486.18127494	486.18127494
B3	415.18932559	.0000000000	415.18932559	415.18932559

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	.	.	.
B1	.	1.0000	.	.
B2	.	.	1.0000	.
B3	.	.	.	1.0000

Non-linear Regression Gompertz:

All the derivatives will be calculated numerically.

Iteration	Residual SS	B0	B1	B2	B3
1	711599.0695	.1000000000	.1000000000	.1000000000	.
1.1	4.6215E+58	6.10003633	-65.385464	679.474710	1000000000
1.2	1025554.834	.741281307	-6.8958053	72.8962268	616.514666
1.3	711013.0721	.164573063	-.60440143	7.43195392	66.4462911
2	711013.0721	.164573063	-.60440143	7.43195392	6.78537954
2.1	710337.4257	.236607515	-.93854988	7.35714227	6.78537954
3	710337.4257	.236607515	-.93854988	7.35714227	6.65511803
3.1	709002.0923	.359897401	-1.2825309	6.98413025	6.65511803
4	709002.0923	.359897401	-1.2825309	6.98413025	5.96844630
4.1	698677.2210	.555589553	-1.6200058	4.60439292	5.96844630
5	698677.2210	.555589553	-1.6200058	4.60439292	-.03454941
6.1	454570.3663	.794468909	-1.9721978	-50.184124	-.03454941
7	454570.3663	.794468909	-1.9721978	-50.184124	-.22562023
7.1	424809.7816	.975441423	-2.1533507	-50.184124	-.22562023
8	424809.7816	.975441423	-2.1533507	-50.184124	-.30934490
8.1	374076.8116	1.19337075	-2.3149182	-50.184124	-.30934490
9	374076.8116	1.19337075	-2.3149182	-50.184124	-.37824589
9.1	286629.3871	1.47587900	-2.4730837	-50.184124	-.37824589
10	286629.3871	1.47587900	-2.4730837	-50.184124	-.44129727
10.1	170207.6306	1.83800516	-2.6240552	-50.184124	-.44129727
11	170207.6306	1.83800516	-2.6240552	-50.184124	-.49664092
11.1	123808.6118	2.49951172	-2.7431595	-50.184124	-.49664092
12	123808.6118	2.49951172	-2.7431595	-50.184124	-.48208367
12.1	110522.8837	3.34659452	-2.7760845	-50.184124	-.48208367
13	110522.8837	3.34659452	-2.7760845	-50.184124	-.38937897
13.1	80486.98423	4.96781492	-2.9567467	-50.184124	-.38937897
14	80486.98423	4.96781492	-2.9567467	-50.184124	-.21475595
					-.21475595

14.1	32037.97274	7.58912949	-3.5885666	-50.184124	.
125953770					
15	32037.97274	7.58912949	-3.5885666	-50.184124	.
125953770					
15.1	1648123.407	-1.7439374	-4.7579393	-50.184124	.
021667613					
15.2	27091.54508	6.78949529	-3.6335108	-50.184124	.
063726669					
16	27091.54508	6.78949529	-3.6335108	-50.184124	.
063726669					
16.1	27445.90592	8.63592457	-3.3656374	-50.184124	.
072907523					
16.2	27050.90491	6.97972544	-3.6095730	-50.184124	.
068489974					
17	27050.90491	6.97972544	-3.6095730	-50.184124	.
068489974					
17.1	27051.77639	7.36071796	-3.5553645	-50.184124	.
069612314					
17.2	27050.87510	7.01840651	-3.6044082	-50.184124	.
068649125					
18	27050.87510	7.01840651	-3.6044082	-50.184124	.
068649125					
18.1	27050.87611	7.08906038	-3.5943564	-50.184124	.
068847518					
18.2	27050.87500	7.02549581	-3.6034133	-50.184124	.
068668963					

Run stopped after 42 model evaluations and 18 derivative evaluations.
Iterations have been stopped because the relative reduction between successive

residual sums of squares is at most SSCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
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Regression	4	463206.12500	115801.53125
Residual	10	27050.87500	2705.08750
Uncorrected Total	14	490257.00000	

(Corrected Total)	13	31868.90000	
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R squared = 1 - Residual SS / Corrected SS = .15118

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper
B0	7.025495814	.000000000	7.025495814	7.025495814
B1	-3.603413284	1.02518E+15	-2.28424E+15	2.28424E+15
B2	-50.18412419	2.02112E+13	-4.50334E+13	4.50334E+13
B3	.068668963	7.19512E+15	-1.60317E+16	1.60317E+16

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	.	.	.
B1	.	1.0000	1.0000	1.0000
B2	.	1.0000	1.0000	1.0000
B3	.	1.0000	1.0000	1.0000

Non-linear Regression Gompertz

All the derivatives will be calculated numerically.

Iteration	Residual	SS	B0	B1	B2
B3					
1	1016196.901	.1000000000	.1000000000	.1000000000	.
1000000000					
1.1	2.9852E+62	6.55754951	-69.241630	608.719114	
601.364750					
1.2	3274441.615	.781792422	-7.2147098	65.3623805	
64.6108196					
1.3	1015163.701	.168563165	-.63552465	6.67318757	
6.59786634					
2	1015163.701	.168563165	-.63552465	6.67318757	
6.59786634					
2.1	1012574.182	.283050506	-1.2508577	6.40149198	
6.30825590					
3	1012574.182	.283050506	-1.2508577	6.40149198	
6.30825590					
3.1	1008062.698	.420936584	-1.6623212	3.94244370	
3.63932826					
4	1008062.698	.420936584	-1.6623212	3.94244370	
3.63932826					
4.1	516845.8649	.580048293	-1.9881851	-32.160733	
-22.417124					
5	516845.8649	.580048293	-1.9881851	-32.160733	
-22.417124					
5.1	500816.1933	.831867074	-2.4223192	-32.160733	
-22.417124					
6	500816.1933	.831867074	-2.4223192	-32.160733	
-22.417124					
6.1	471452.1868	1.15055570	-2.8054197	-32.160733	
-22.417124					
7	471452.1868	1.15055570	-2.8054197	-32.160733	
-22.417124					
7.1	418911.9155	1.56519614	-3.1658024	-32.160733	
-22.417124					
8	418911.9155	1.56519614	-3.1658024	-32.160733	
-22.417124					
8.1	333079.5070	2.09220389	-3.5025064	-32.160733	
-22.417124					
9	333079.5070	2.09220389	-3.5025064	-32.160733	
-22.417124					
9.1	190641.2023	2.84489767	-3.8622676	-32.160733	
-22.417124					
10	190641.2023	2.84489767	-3.8622676	-32.160733	
-22.417124					
10.1	35475.75821	3.89542174	-4.2315337	-32.160733	
-22.417124					
11	35475.75821	3.89542174	-4.2315337	-32.160733	
-22.417124					
11.1	24913.50119	5.71449709	-3.9529475	-32.160733	
-22.417124					
12	24913.50119	5.71449709	-3.9529475	-32.160733	
-22.417124					
12.1	50134.74005	2.48821805	-4.5878722	-32.160733	
-22.417124					
12.2	22723.40613	5.58000867	-4.0468288	-32.160733	
-22.417124					

13	22723.40613	5.58000867	-4.0468288	-32.160733
-22.417124				
13.1	22741.56812	6.23307241	-3.9277119	-32.160733
-22.417124				
13.2	22721.20166	5.64104488	-4.0338099	-32.160733
-22.417124				
14	22721.20166	5.64104488	-4.0338099	-32.160733
-22.417124				
14.1	22721.24254	5.77788486	-4.0096092	-32.160733
-22.417124				
14.2	22721.20000	5.65484609	-4.0314205	-32.160733
-22.417124				
15	22721.20000	5.65484609	-4.0314205	-32.160733
-22.417124				
15.1	22721.20007	5.68222360	-4.0265821	-32.160733
-22.417124				

Run stopped after 35 model evaluations and 15 derivative evaluations.
Iterations have been stopped because the relative reduction between
successive
residual sums of squares is at most SSCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
Regression	4	507529.80000	126882.45000
Residual	10	22721.20000	2272.12000
Uncorrected Total	14	530251.00000	
(Corrected Total)	13	22721.20000	

R squared = 1 - Residual SS / Corrected SS = .00000

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper
B0	5.654846089	1.89423E+16	-4.22062E+16	4.22062E+16
B1	-4.031420519	3.34976E+15	-7.46372E+15	7.46372E+15
B2	-32.16073343	.0000000000	-32.16073343	-32.16073343
B3	-22.41712380	.0000000000	-22.41712380	-22.41712380

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	1.0000	.	.
B1	1.0000	1.0000	.	.
B2	.	.	1.0000	.
B3	.	.	.	1.0000

Non-linear Regression Chapman Richards

All the derivatives will be calculated numerically.

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Iteration	Residual SS	B0	B1	B2	B3
1	965959.7963	.1000000000	.1000000000	.1000000000	.
1000000000					
1.1	927331.1975	5.73354257	-46.562466	483.731605	
-442.36370					
2	927331.1975	5.73354257	-46.562466	483.731605	
-442.36370					
2.1	870213.1064	14.3331791	-46.724610	483.731605	
-436.32410					
3	870213.1064	14.3331791	-46.724610	483.731605	
-436.32410					
3.1	769448.0331	30.3318899	-47.487010	483.731605	
-407.40991					
4	769448.0331	30.3318899	-47.487010	483.731605	
-407.40991					
4.1	588759.6952	62.2780382	-50.889638	483.731605	
-266.44486					
5	588759.6952	62.2780382	-50.889638	483.731605	
-266.44486					
5.1	329749.5564	124.164770	-70.276138	483.731605	
1069.03147					
6	329749.5564	124.164770	-70.276138	483.731605	
1069.03147					
6.1	6689.942410	244.289688	118.679424	483.731605	
5906.18123					
7	6689.942410	244.289688	118.679424	483.731605	
5906.18123					
7.1	6606.000000	239.000000	118.679424	483.731605	
5906.18123					
8	6606.000000	239.000000	118.679424	483.731605	
5906.18123					

Run stopped after 15 model evaluations and 8 derivative evaluations.
Iterations have been stopped because the magnitude of the largest correlation

between the residuals and any derivative column is at most RCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
Regression	4	171363.00000	42840.75000
Residual	10	6606.00000	660.60000
Uncorrected Total	14	177969.00000	
)Corrected Total)	13	6606.00000	

R squared = 1 - Residual SS / Corrected SS = .00000

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper

B0	239.00000000	14.839137441	205.93634134	272.06365866
B1	118.67942445	.000000000	118.67942445	118.67942445
B2	483.73160481	.000000000	483.73160481	483.73160481

B3 5906.1812274 .0000000000 5906.1812274 5906.1812274

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	.	.	.
B1	.	1.0000	.	.
B2	.	.	1.0000	.
B3	.	.	.	1.0000

Non-linear Regression Von Bertalanffy

All the derivatives will be calculated numerically.

Iteration	Residual SS	B0	B1	B2	B3
1	966444.0497	.1000000000	.1000000000	.1000000000	.
1000000000					
1.1	952586.3648	7.54772473	-8.5236263	86.6159739	
47.2285639					
2	952586.3648	7.54772473	-8.5236263	86.6159739	
47.2285639					
2.1	951012.0742	7.54799965	-8.4332046	151.465588	
21.9409288					
3	951012.0742	7.54799965	-8.4332046	151.465588	
21.9409288					
3.1	946462.2616	10.8103466	-8.3447222	151.465588	
24.2112266					
4	946462.2616	10.8103466	-8.3447222	151.465588	
24.2112266					
4.1	937814.8851	17.1661276	-8.1813637	151.465588	
27.9345511					
5	937814.8851	17.1661276	-8.1813637	151.465588	
27.9345511					
5.1	922145.3867	29.2108669	-7.8897750	151.465588	
33.4973944					
6	922145.3867	29.2108669	-7.8897750	151.465588	
33.4973944					
6.1	911333.7606	53.3261821	-7.3146259	151.465588	
42.1160935					
7	911333.7606	53.3261821	-7.3146259	151.465588	
42.1160935					
7.1	893483.3491	53.3261877	-5.4788796	185.254351	
32.8421379					
8	893483.3491	53.3261877	-5.4788796	185.254351	
32.8421379					
8.1	868302.5108	77.4698615	-4.4961866	185.254351	
32.9058667					
9	868302.5108	77.4698615	-4.4961866	185.254351	
32.9058667					
9.1	828300.6868	125.698038	-1.0716173	185.254351	
33.0666189					
10	828300.6868	125.698038	-1.0716173	185.254351	
33.0666189					
10.1	10101.79381	204.863734	79.6193659	185.254351	
33.1079499					
11	10101.79381	204.863734	79.6193659	185.254351	
33.1079499					
11.1	6606.006478	238.998087	79.6193659	185.254351	
33.1079499					

12	6606.006478	238.998087	79.6193659	185.254351
33.1079499				
12.1	6606.000000	238.951929	79.6193659	185.254351
33.1079499				
13	6606.000000	238.951929	79.6193659	185.254351
33.1079499				
13.1	6606.000000	238.951928	79.6193659	185.254351
33.1079499				

Run stopped after 26 model evaluations and 13 derivative evaluations.
Iterations have been stopped because the relative reduction between successive residual sums of squares is at most SSCON = 1.00E-08 and the relative difference between successive parameter estimates is at most PCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
Regression	4	171363.00000	42840.75000
Residual	10	6606.00000	660.60000
Uncorrected Total	14	177969.00000	
Corrected Total	13	6606.00000	

R squared = 1 - Residual SS / Corrected SS = .00000

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper
B0	238.95192768	14.740636213	206.10774343	271.79611193
B1	79.619365908	.000000000	79.619365908	79.619365908
B2	185.25435136	.000000000	185.25435136	185.25435136
B3	33.107949859	.000000000	33.107949859	33.107949859

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	.	.	.
B1	.	1.0000	.	.
B2	.	.	1.0000	.
B3	.	.	.	1.0000

Non-linear Regression Chapman Richards:

All the derivatives will be calculated numerically.

Iteration	Residual	SS	B0	B1	B2	B3
1	7376102.045	.1000000000	.1000000000	.1000000000	.1000000000	.
1.1	7107198.090	5.63760085	-46.209781	494.486384		
-438.83331						
2	7107198.090	5.63760085	-46.209781	494.486384		
-438.83331						
2.1	6699110.454	14.2856590	-46.352926	494.486384		
-433.51380						
3	6699110.454	14.2856590	-46.352926	494.486384		
-433.51380						
3.1	5970156.963	30.4917358	-47.038784	494.486384		
-407.61579						
4	5970156.963	30.4917358	-47.038784	494.486384		
-407.61579						
4.1	4649219.334	62.8640912	-50.103729	494.486384		
-282.30033						
5	4649219.334	62.8640912	-50.103729	494.486384		
-282.30033						
5.1	2662258.296	126.348050	-66.833451	494.486384		
784.005680						
6	2662258.296	126.348050	-66.833451	494.486384		
784.005680						
6.1	753570.4913	255.381111	-48.424966	494.486384		
1388.05605						
7	753570.4913	255.381111	-48.424966	494.486384		
1388.05605						
7.1	155731.8571	274.928571	1762.21937	494.486384		
-14165.487						
8	155731.8571	274.928571	1762.21937	494.486384		
-14165.487						

Run stopped after 15 model evaluations and 8 derivative evaluations.
Iterations have been stopped because the magnitude of the largest correlation between the residuals and any derivative column is at most RCON = 1.000E-08

Nonlinear Regression Summary Statistics Dependent Variable BPPS7

Source	DF	Sum of Squares	Mean Square
Regression	4	2116400.14286	529100.03571
Residual	85	155731.85714	1832.13950
Uncorrected Total	89	2272132.00000	
Corrected Total	88	155731.85714	

R squared = 1 - Residual SS / Corrected SS = .00000

Parameter	Estimate	Asymptotic Std. Error	Asymptotic 95 % Confidence Interval	
			Lower	Upper
B0	274.92857143	8.089100903	258.84527170	291.01187115
B1	1762.2193651	.000000000	1762.2193651	1762.2193651
B2	494.48638402	.000000000	494.48638402	494.48638402
B3	-14165.48733	.000000000	-14165.48733	-14165.48733

Asymptotic Correlation Matrix of the Parameter Estimates

	B0	B1	B2	B3
B0	1.0000	.	.	.
B1	.	1.0000	.	.
B2	.	.	1.0000	.
B3	.	.	.	1.0000