

Table S2 Calculation of accuracy indicators for the Gompertz model in the chamber

15°C, 60%			15°C, 75%			15°C, 85%		
Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)
24	0.777646865	0.000	24	0.933178021	0.000	24	0.883670356	0.000
48	1.342661278	0.000	48	1.600910433	0.000	48	1.499737579	0.000
72	2.172103257	0.000	72	2.567960334	0.000	72	2.388491091	0.000
96	3.318134204	0.000	96	3.883838522	3.770	96	3.59695749	3.479
120	4.819198405	4.603	120	5.579126037	4.795	120	5.15669165	4.218
144	6.694793713	6.989	144	7.661043946	8.392	144	7.079472782	8.279
168	8.943009678	10.133	168	10.11263807	11.022	168	9.355895477	9.987
192	11.54097337	12.597	192	12.89526155	13.860	192	11.95675994	12.544
216	14.44773643	15.770	216	15.95341836	17.087	216	14.83662988	15.805
240	17.60878089	17.917	240	19.22079505	19.171	240	17.93866644	17.835
264	20.96123218	21.940	264	22.62639385	23.254	264	21.19984292	21.795
288	24.43898189	24.853	288	26.09995876	26.205	288	24.55581532	24.301
312	27.97714762	28.202	312	29.57622516	29.782	312	27.94497194	28.209
336	31.51554822	32.277	336	32.99783017	33.126	336	31.31143319	31.880
360	35.0010929	34.283	360	36.31694769	36.439	360	34.60697422	34.258
384	38.38914353	37.633	384	39.49584821	38.975	384	37.79197943	37.411
408	41.64400724	40.607	408	42.50664193	42.298	408	40.83561181	40.658
432	44.73875879	43.963	432	45.3304661	44.054	432	43.71540377	42.848
456	47.65459532	47.107	456	47.95634627	45.706	456	46.4164664	46.122

480	50.37990461	49.964	480	50.37991425	49.064	480	48.93048504	47.754
504	52.90919399	52.161	504	52.60211651	52.621	504	51.25463242	50.943
528	55.24199055	54.023	528	54.62800128	54.085	528	53.39049394	52.528
552	57.38178903	57.270	552	56.46563644	57.092	552	55.34306725	56.088
576	59.33509495	59.847	576	58.1251823	58.902	576	57.11987215	57.633
600	61.1105881	62.043	600	59.61812395	61.016	600	58.73018686	59.052
624	62.71841496	63.537	624	60.95665546	61.897	624	60.18441326	61.203
648	64.16960769	64.659	648	62.1532009	63.097	648	61.49356427	62.368
672	65.4756202	66.496	672	63.22005381	64.236	672	62.66886164	62.946
696	66.64796819	67.957	696	64.16911603	65.370	696	63.72142983	63.931
720	67.6979586	68.592	720	65.01171751	65.682	720	64.66207112	64.869
744	68.6364937	68.723	744	65.75850064	65.741	744	65.50110741	65.312
768	69.47393621	69.348	768	66.41935467	65.979	768	66.24827594	65.701
792	70.22002316	69.474	792	67.00338799	66.129	792	66.91266722	66.662
816	70.88381768	69.908	816	67.51892855	66.519	816	67.50269547	67.339
840	71.47368999	70.649	840	67.97354405	66.808	840	68.02609353	67.751
			1.030127584	0.012891016	0.012891016	1.033905574	0.014480877	0.014480877
1.046893209	0.019902383	0.019902383	1.163610825	0.065807753	0.065807753	1.222471795	0.087238848	0.087238848
0.957931031	- 0.018665758	0.018665758	0.91293473	-0.03956027	0.039560271	0.855112064	- 0.067976966	0.067976966
0.882560462	- 0.054255532	0.054255532	0.917495743	-0.03739594	0.037395942	0.936807397	- 0.028349689	0.028349689
0.916200728	- 0.038009367	0.038009367	0.930416428	-0.03132263	0.03132263	0.953160253	- 0.020834076	0.020834076

0.916161298	- 0.038028058	0.038028058	0.933685563	-0.02979936	0.029799357	0.938710343	- 0.027468397	0.027468397
0.982791298	- 0.007538697	0.007538697	1.002579983	0.00111903	0.00111903	1.005812528	0.002517041	0.002517041
0.955403402	- 0.019813217	0.019813217	0.97301083	-0.01188233	0.011882326	0.972692953	-0.01202423	0.01202423
0.98335671	- 0.007288915	0.007288915	0.996001059	-0.0017402	0.0017402	1.010506587	0.004539149	0.004539149
0.992034894	- 0.003473052	0.003473052	0.993079515	-0.00301598	0.003015976	0.990651996	- 0.004078881	0.004078881
0.976398759	- 0.010372781	0.010372781	0.996136853	-0.00168099	0.001680992	0.982165408	- 0.007815366	0.007815366
1.020957616	0.009007713	0.009007713	0.996650503	-0.00145711	0.00145711	1.010201393	0.004407963	0.004407963
1.020088952	0.008638044	0.008638044	1.013363649	0.005765321	0.005765321	1.01017462	0.004396453	0.004396453
1.025549574	0.010956658	0.010956658	1.00494217	0.002141071	0.002141071	1.004380786	0.001898396	0.001898396
1.017643791	0.007595787	0.007595787	1.028980872	0.012407302	0.012407302	1.020235803	0.00870056	0.00870056
1.011620026	0.005017418	0.005017418	1.049235248	0.020872872	0.020872872	1.006391784	0.002767083	0.002767083
1.008318928	0.00359792	0.00359792	1.026811991	0.011490932	0.011490932	1.024647095	0.010574313	0.010574313
1.014336913	0.00618223	0.00618223	0.99965064	-0.00015175	0.000151752	1.006112339	0.002646475	0.002646475
1.022561134	0.009689282	0.009689282	1.010047246	0.004341689	0.004341689	1.016429374	0.007077207	0.007077207
1.001947105	0.000844795	0.000844795	0.989032338	-0.00478951	0.004789508	0.986714102	- 0.005808665	0.005808665
0.991450579	- 0.003728929	0.003728929	0.986815881	-0.00576387	0.00576387	0.99110523	- 0.003880232	0.003880232

0.984975755	-0.00657446	0.00657446	0.977087339	-0.01006661	0.010066614	0.994546133	- 0.002375067	0.002375067
0.987116404	- 0.005631631	0.005631631	0.984807914	-0.00664847	0.00664847	0.983353225	- 0.007290454	0.007290454
0.992436808	- 0.003297137	0.003297137	0.985042092	-0.00654521	0.006545211	0.985979417	- 0.006132151	0.006132151
0.98465502	- 0.006715901	0.006715901	0.984191822	-0.00692025	0.006920248	0.995597205	- 0.001916331	0.001916331
0.980740238	- 0.008446006	0.008446006	0.981629433	-0.00805243	0.008052428	0.996721932	- 0.001425985	0.001425985
0.986965806	- 0.005697893	0.005697893	0.989792021	-0.00445605	0.004456051	0.99681005	- 0.001387592	0.001387592
0.998737236	- 0.000548758	0.000548758	1.000266206	0.000115596	0.000115596	1.002895447	0.00125566	0.00125566
1.001810065	0.00078539	0.00078539	1.006677978	0.002890568	0.002890568	1.008329796	0.003602601	0.003602601
1.010740588	0.004639706	0.004639706	1.013227566	0.005706997	0.005706997	1.00375726	0.001628699	0.001628699
1.013954489	0.006018462	0.006018462	1.015029173	0.006478524	0.006478524	1.002430916	0.001054452	0.001054452
1.01168006	0.00504319	0.00504319	1.017446175	0.007511443	0.007511443	1.004060361	0.001759822	0.001759822
	Af	1.025		Af	1.027		Af	1.026
	Bf	0.990		Bf	0.996		Bf	0.997
	0.215865071	0.046597729		0.113588522	0.012902352		0.11795749	0.01391397
	- 0.294011842	0.086442963		0.784459371	0.615376504		0.93844165	0.88067273
	- 1.190018099	1.416143077		-0.73062272	0.533809561		- 1.199527218	1.438865547

	- 1.055582183	1.114253746		-0.90936193	0.826939112		- 0.631104523	0.398292919
	- 1.322124678	1.748013665		-0.96440512	0.930077226		- 0.587573395	0.345242495
	- 0.308330221	0.095067525		-1.13308164	1.283873993		- 0.968703458	0.938386389
	- 0.978434489	0.95733405		0.049461717	0.002446461		0.103666438	0.01074673
	- 0.413629221	0.171089133		-0.62760615	0.393889486		- 0.595157084	0.354211955
	- 0.224630157	0.050458708		-0.10479124	0.010981205		0.255315317	0.065185911
	- 0.761785109	0.580316552		-0.20610818	0.04248058		- 0.263694726	0.069534908
	0.718481785	0.516216075		-0.12796983	0.016376278		- 0.568566806	0.323268213
	0.756010192	0.571551411		-0.12205231	0.014896767		0.349474219	0.122132229
	1.037479467	1.076363644		0.520848206	0.271282854		0.380646096	0.14489145
	0.775675459	0.601672418		0.209041927	0.043698527		0.178111811	0.031723817
	0.547386987	0.299632513		1.276716105	1.630004013		0.867070437	0.751811142
	0.416	0.172764136		2.250346266	5.064058318		0.294799732	0.086906882
	0.747832878	0.559254014		1.31551425	1.730577742		1.176985038	1.385293779
	1.218823883	1.485531657		-0.01838349	0.000337953		0.311382418	0.09695901
	0.111511249	0.012434759		0.543401281	0.295284952		0.862993937	0.744758535

	- 0.511655052	0.261790893		-0.62616356	0.392080801		- 0.745182747	0.555297327
	- 0.932145238	0.868894744		-0.7765677	0.603057392		- 0.512627852	0.262787315
	- 0.818585042	0.67008147		-1.39804272	1.95452344		-0.32206314	0.103724666
	- 0.489025642	0.239146079		-0.94034454	0.884247853		- 1.018836736	1.038028294
	- 1.020379803	1.041174941		-0.9437991	0.890756741		- 0.874435726	0.76463784
	- 1.308831811	1.713040709		-1.01544619	1.031130961		- 0.277138362	0.076805671
	- 0.894041401	0.799310027		-1.20088397	1.442122315		- 0.209570166	0.043919654
	- 0.086781303	0.007530995		-0.67048249	0.449546775		- 0.206928883	0.042819563
	0.125525102	0.015756551		0.017500643	0.000306273		0.189107408	0.035761612
	0.746189822	0.55679925		0.440604668	0.194132474		0.547275943	0.299510958
	0.975534342	0.951667252		0.874721328	0.765137402		0.25046722	0.062733828
	0.825178877	0.680920179		0.999728548	0.999457169		0.163695469	0.026796207
				1.165544052	1.358492936		0.275093529	0.07567645
		19.36725086			24.68428642			11.591298
	RMSE	0.832		RMSE	0.923		RMSE	0.632

20°C, 60%	20°C, 75%	20°C, 85%
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Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)
24	2.810016493	0.000	24	2.779162235	0.000	24	2.181987415	0.000
48	4.636895719	4.118	48	4.321472949	3.923	48	3.674761384	3.452
72	7.116362676	5.634	72	6.366074686	5.303	72	5.758731315	4.031
96	10.26500644	9.084	96	8.943527105	7.984	96	8.481393447	6.242
120	14.04200373	14.398	120	12.05219464	12.934	120	11.84063793	11.729
144	18.35699669	21.239	144	15.65877294	17.496	144	15.78558202	16.232
168	23.08491197	24.600	168	19.70273558	21.884	168	20.22508069	21.109
192	28.08325631	28.533	192	24.10335752	24.965	192	25.04081082	27.174
216	33.20816999	33.654	216	28.76782116	29.314	216	30.10161666	31.154
240	38.32695758	38.680	240	33.59911113	32.807	240	35.27649981	36.969
264	43.32625494	42.220	264	38.50278857	38.626	264	40.44469979	40.882
288	48.11605483	46.475	288	43.39215796	41.888	288	45.50232131	45.340
312	52.63040591	51.800	312	48.19170057	46.353	312	50.36570265	49.870
336	56.82579868	57.303	336	52.83890489	52.488	336	54.97213644	52.844
360	60.67819181	59.970	360	57.28477116	56.389	360	59.27870188	57.498
384	64.17944485	64.287	384	61.49332358	60.080	384	63.259935	64.041
408	67.33369935	66.962	408	65.44045715	65.669	408	66.904936	66.188
432	70.15404627	70.905	432	69.112402	70.181	432	70.21435379	68.708
456	72.65965576	73.188	456	72.50402895	74.168	456	73.19753665	71.928
480	74.87343091	74.866	480	75.61715805	77.572	480	75.87001328	77.090
504	76.82017431	76.904	504	78.45897727	80.004	504	78.25137664	80.403
528	78.52521526	78.666	528	81.04063368	80.872	528	80.36358011	81.610

552	80.01342748	79.698	552	83.37602561	83.027	552	82.22961847	82.399
576	81.30856336	81.566	576	85.48080079	83.173	576	83.87254583	82.985
1.1261435	0.051593721	0.0515937	1.101713945	0.042068847	0.042068847	1.064531108	0.027158357	0.027158357
1.2631102	0.101441231	0.1014412	1.200466658	0.079350102	0.079350102	1.428552027	0.154896062	0.154896062
1.1300717	0.053106006	0.053106	1.120181251	0.049288299	0.049288299	1.358762167	0.133143446	0.133143446
0.9752746	-0.010873085	0.0108731	0.931834695	-0.03066112	0.030661123	1.00953963	0.004123372	0.004123372
0.8643264	-0.063322211	0.0633222	0.894991594	-0.04818104	0.048181043	0.972512639	-0.012104746	0.012104746
0.9384111	-0.027606884	0.0276069	0.900319207	-0.04560348	0.045603485	0.958114603	-0.01858254	0.01858254
0.9842378	-0.006899973	0.0069	0.965496724	-0.0152492	0.015249196	0.921507367	-0.035501188	0.035501188
0.9867525	-0.005791747	0.0057917	0.981368917	-0.0081677	0.008167702	0.966219961	-0.014923995	0.014923995
0.9908642	-0.003985862	0.0039859	1.024135905	0.010357592	0.010357592	0.954222696	-0.020350258	0.020350258
1.0262022	0.011232922	0.0112329	0.996810143	-0.00138755	0.001387552	0.989303356	-0.004670518	0.004670518
1.0353049	0.015068276	0.0150683	1.035907668	0.015321048	0.015321048	1.003570868	0.001548046	0.001548046
1.0160245	0.006904165	0.0069042	1.039671086	0.016895966	0.016895966	1.009950023	0.004299883	0.004299883
0.9916723	-0.003631811	0.0036318	1.006685431	0.002893783	0.002893783	1.040268773	0.017145562	0.017145562
1.0118035	0.005096168	0.0050962	1.015892572	0.006847785	0.006847785	1.030969806	0.013245946	0.013245946
0.998327	-0.000727203	0.0007272	1.02353018	0.010100653	0.010100653	0.987803673	-0.005329363	0.005329363
1.0055509	0.002404059	0.0024041	0.996516825	-0.00151536	0.001515364	1.010839448	0.004682182	0.004682182
0.989409	-0.004624136	0.0046241	0.984770567	-0.00666494	0.00666494	1.021926473	0.00941965	0.00941965
0.992781	-0.003146543	0.0031465	0.977568866	-0.00985264	0.009852638	1.017650104	0.007598481	0.007598481
1.0000993	4.31043E-05	4.31E-05	0.974799645	-0.01108464	0.011084638	0.984172386	-0.006928825	0.006928825
0.9989165	-0.000470817	0.0004708	0.980689543	-0.00846846	0.008468455	0.973239514	-0.011780267	0.011780267
0.9982103	-0.000777932	0.0007779	1.002082095	0.000903302	0.000903302	0.984733151	-0.006681441	0.006681441

1.0039536	0.001713635	0.0017136	1.004200401	0.00182039	0.00182039	0.997947402	-0.000892348	0.000892348
0.9968438	-0.001372877	0.0013729	1.027746995	0.011886215	0.011886215	1.010692211	0.004618919	0.004618919
	Af	1.038966		Af	1.04446611		Af	1.053397804
	Bf	1.011617		Bf	1.006115252		Bf	1.024742008
	0.519395719	0.2697719		0.398972949	0.159179414		0.222761384	0.049622634
	1.482362676	2.1973991		1.063074686	1.130127789		1.727564648	2.984479613
	1.181506444	1.3959575		0.959527105	0.920692264		2.239393447	5.014883013
	-0.355996269	0.1267333		-0.88163869	0.777286786		0.111887933	0.012518909
	-2.881503307	8.3030613		-1.83722706	3.375403283		-0.446167978	0.199065864
	-1.515088031	2.2954917		-2.18143109	4.758641588		-0.884169309	0.781755367
	-0.449743695	0.2022694		-0.86136471	0.741949157		-2.13293918	4.549429544
	-0.445830008	0.1987644		-0.54615106	0.298280981		-1.052383344	1.107510702
	-0.35337575	0.1248744		0.791833354	0.627000061		-1.692333524	2.863992756
	1.106254945	1.2238		-0.12321143	0.015181056		-0.43730021	0.191231473
	1.640804825	2.6922405		1.5041024	2.26232403		0.16190464	0.026213113
	0.830072578	0.6890205		1.838867234	3.381432704		0.496202647	0.246217067
	-0.477201322	0.2277211		0.350904893	0.123134244		2.127969773	4.528255357
	0.707858474	0.5010636		0.896160048	0.803102831		1.780701882	3.170899193
	-0.107555154	0.0115681		1.413684695	1.998504416		-0.781065	0.610062534
	0.371699347	0.1381604		-0.2287373	0.052320751		0.717435997	0.51471441
	-0.750953728	0.5639315		-1.06882022	1.142376663		1.506520458	2.269603892
	-0.52834424	0.2791476		-1.66366549	2.767782866		1.269536646	1.611723296
	0.007430911	5.522E-05		-1.95484195	3.821407061		-1.220153383	1.488774278
	-0.083325691	0.0069432		-1.54491162	2.386751917		-2.151623364	4.6294831

	-0.140784744	0.0198203		0.168383682	0.028353064		-1.245919895	1.552316384
	0.315094147	0.0992843		0.348747832	0.12162505		-0.169131534	0.028605476
	-0.257436642	0.0662736		2.307800785	5.325944463		0.887295833	0.787293894
		21.633353			37.01880244			39.21865187
	RMSE	1.040		RMSE	1.360		RMSE	1.400

25°C, 60%			25°C, 60%			25°C, 60%		
Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)
24	7.904366429	5.356	24	7.213617405	4.531	24	8.062210688	7.233
48	15.04043937	17.201	48	15.51519726	16.220	48	15.91882894	18.213
72	24.69979914	23.939	72	26.93332672	29.239	72	26.52323221	25.446
96	36.2082909	38.415	96	40.06776136	40.332	96	38.9049578	38.118
120	48.62891714	47.996	120	53.33700789	51.368	120	51.86302743	51.509
144	61.04621814	57.783	144	65.53878147	64.975	144	64.35011985	64.621
168	72.74668324	75.444	168	76.02073618	77.003	168	75.65834897	77.415
192	83.27868602	82.802	192	84.59321178	84.629	192	85.43123001	84.230
1.4757966	0.169026497	0.1690265	1.592058575	0.201959042	0.201959042	1.114681233	0.047150689	0.047150689
0.8743933	-0.058293173	0.0582932	0.95655959	-0.01928797	0.01928797	0.87403062	-0.058473352	0.058473352
1.03177	0.013582881	0.0135829	0.92115966	-0.03566509	0.035665089	1.042347703	0.018012614	0.018012614
0.9425622	-0.025689985	0.02569	0.993439175	-0.00285872	0.002858718	1.02064196	0.008873419	0.008873419
1.0131939	0.00569257	0.0056926	1.03833899	0.016339162	0.016339162	1.006880448	0.002977908	0.002977908
1.0564737	0.023858678	0.0238587	1.008671077	0.003749568	0.003749568	0.995804319	-0.001825994	0.001825994

0.9642442	-0.015812948	0.0158129	0.987247029	-0.00557416	0.005574164	0.977303914	-0.009970362	0.009970362
1.0057569	0.002493037	0.002493	0.999574656	-0.00018476	0.000184764	1.014265322	0.006151577	0.006151577
	Af	1.094728		Af	1.085681181		Af	1.045152081
	Bf	1.033611		Bf	1.046669655		Bf	1.003718808
	2.548366429	6.4941715		2.682617405	7.19643614		0.829460688	0.688005032
	-2.160560633	4.6680222		-0.7045944	0.496453272		-2.294296062	5.263794421
	0.760549142	0.578435		-2.30517328	5.313823836		1.077565539	1.16114749
	-2.206459105	4.8684618		-0.26461364	0.07002038		0.786832805	0.619105862
	0.633250473	0.4010062		1.969382885	3.878468949		0.354402434	0.125601085
	3.263218135	10.648593		0.563406469	0.317426849		-0.271130147	0.073511556
	-2.697566761	7.2768664		-0.98201382	0.964351146		-1.757026028	3.087140463
	0.476686016	0.2272296		-0.03599655	0.001295752		1.201563342	1.443754466
		35.162785			18.23827632			12.46206038
	RMSE	2.652		RMSE	1.910		RMSE	1.579

30°C, 60%			30°C, 60%			30°C, 60%		
Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)	Time (h)	Predictive Dt(mm)	Actual Dt(mm)
24	8.024664348	3.500	24	7.345279085	3.875	24	7.896822411	3.500
48	16.39167078	19.961	48	15.05008561	17.249	48	17.23080169	20.567
72	27.94225905	29.648	72	25.9793622	27.374	72	30.11601826	31.990
96	41.61374382	40.646	96	39.36087771	38.712	96	44.90876983	43.054
120	56.02806358	53.992	120	53.99894694	54.323	120	59.77454851	59.190

144	69.96197905	70.845	144	68.6898665	66.700	144	73.34768523	73.125
168	82.58300836	82.858	168	82.49501636	83.718	168	84.91495126	85.567
2.2927612	0.360358832	0.3603588	1.895555893	0.277736595	0.277736595	2.256234974	0.353384327	0.353384327
0.8211848	-0.085559072	0.0855591	0.872529429	-0.05921992	0.059219916	0.837788094	-0.076865816	0.076865816
0.9424669	-0.025733887	0.0257339	0.949052466	-0.02270978	0.022709778	0.941408729	-0.026221779	0.026221779
1.0238091	0.010218976	0.010219	1.016756416	0.007216921	0.007216921	1.043084119	0.018319334	0.018319334
1.0377105	0.016076198	0.0160762	0.994034699	-0.00259846	0.002598455	1.009872244	0.004266436	0.004266436
0.9875359	-0.005447119	0.0054471	1.029833081	0.012766838	0.012766838	1.003045268	0.001320533	0.001320533
0.9966772	-0.001445494	0.0014455	0.985391629	-0.00639113	0.006391132	0.99238315	-0.003320618	0.003320618
	Af	1.180647		Af	1.136370492		Af	1.172464859
	Bf	1.092327		Bf	1.070392384		Bf	1.093194626
	4.524664348	20.472587		3.470279085	12.04283693		4.396822411	19.33204731
	-3.569329225	12.740111		-2.19871439	4.83434498		-3.336214978	11.13033038
	-1.705740951	2.9095522		-1.3946378	1.94501459		-1.87435674	3.513213188
	0.967743821	0.9365281		0.648677715	0.420782778		1.8549365	3.440789417
	2.036063575	4.1455549		-0.32405306	0.105010384		0.584340175	0.34145344
	-0.883020951	0.779726		1.989866503	3.959568698		0.22268523	0.049588712
	-0.275324977	0.0758038		-1.22298364	1.495688972		-0.651748739	0.424776419
		42.059864			24.80324733			38.23219887
	RMSE	3.243		RMSE	2.490		RMSE	3.092