# Growth analysis report

07 november, 2022

## **Summary**

The dataset contains 70 samples.

0 conditions were identified:

0 different concentrations were identified:

The following parameters were used to fit the data:

- · minimum density considered: NA
- minimum time considered for linear and spline fits (t0): 0
- · log-transform density values for spline fits: TRUE
- log-transform density values for parametric fits: TRUE
- log-transform time values: FALSE
- perform dose-response analysis: FALSE
- growth threshold: 1.5 \* start\_density

## **Growth fit results**

#### **Grouped results**

Table 1: Smooth Spline Fit

Sample Conc.	mumax	tD	lagtime	Y_max	dY	t(mumax)
Test1   0	0.662 ± 0.003	1.046 ± 0.005	4.268 ± 0.126	6.81 ± 0.405	6.756 ± 0.403	7.917 ± 0.144
Test1   0.017	$0.63 \pm 0.002$	1.1 ± 0.003	4.547 ± 0.162	3.878 ± 0.124	$3.826 \pm 0.126$	$8 \pm 0.354$
Test1   0.026	$0.604 \pm 0.009$	1.148 ± 0.017	4.471 ± 0.272	$3.233 \pm 0.234$	3.181 ± 0.23	$7.833 \pm 0.289$
Test1   0.039	$0.564 \pm 0.009$	1.23 ± 0.019	4.595 ± 0.108	2.707 ± 0.11	2.651 ± 0.108	8.083 ± 0.144
Test1   0.059	$0.529 \pm 0.002$	$1.309 \pm 0.004$	$4.697 \pm 0.035$	1.99 ± 0.094	1.942 ± 0.095	8.25
Test1   0.088	$0.475 \pm 0.006$	1.46 ± 0.019	4.319 ± 0.173	1.704 ± 0.147	1.653 ± 0.146	8 ± 0.25
Test1   0.13	$0.384 \pm 0.005$	1.806 ± 0.023	4.477 ± 0.19	1.192 ± 0.101	1.138 ± 0.097	8.417 ± 0.382
Test1   0.2	$0.268 \pm 0.004$	$2.59 \pm 0.036$	$3.965 \pm 0.103$	$0.79 \pm 0.044$	$0.739 \pm 0.04$	9.167 ± 0.144
Test1   0.3	$0.148 \pm 0.009$	$4.7 \pm 0.296$	$3.163 \pm 0.437$	$0.428 \pm 0.025$	$0.377 \pm 0.024$	9.917 ± 0.764
Test1   0.44	$0.073 \pm 0.001$	9.555 ± 0.181	$2.195 \pm 0.384$	$0.205 \pm 0.023$	0.15 ± 0.018	9.5 ± 1.5
Test1   0.67	$0.04 \pm 0.005$	17.581 ± 2.557	1.034 ± 1.521	$0.098 \pm 0.006$	$0.045 \pm 0.003$	4.167 ± 4.785
Test1   1						
Test2   0	$0.48 \pm 0.007$	1.443 ± 0.022	4.002 ± 0.101	$3.725 \pm 0.362$	$3.675 \pm 0.359$	8.583 ± 0.144
Test2   0.017	$0.436 \pm 0.011$	1.589 ± 0.04	$3.999 \pm 0.036$	$2.65 \pm 0.083$	$2.593 \pm 0.083$	8.25
Test2   0.026	$0.42 \pm 0.002$	1.651 ± 0.009	4.01 ± 0.286	$2.153 \pm 0.024$	$2.1 \pm 0.02$	$8.5 \pm 0.433$
Test2   0.039	$0.392 \pm 0.015$	1.771 ± 0.067	$3.989 \pm 0.132$	1.761 ± 0.283	1.71 ± 0.28	8.417 ± 0.289
Test2   0.059	$0.351 \pm 0.008$	1.977 ± 0.044	$3.897 \pm 0.19$	1.45 ± 0.131	1.399 ± 0.128	$8.5 \pm 0.433$
Test2   0.088	$0.29 \pm 0.005$	$2.392 \pm 0.045$	$3.866 \pm 0.229$	1.204 ± 0.068	1.15 ± 0.068	$9.25 \pm 0.25$
Test2   0.13	$0.213 \pm 0.005$	$3.257 \pm 0.078$	3.413 ± 0.128	0.871 ± 0.061	0.817 ± 0.062	9.5 ± 0.25
Test2   0.2	$0.122 \pm 0.002$	5.66 ± 0.093	2.686 ± 0.268	$0.466 \pm 0.019$	$0.414 \pm 0.021$	10.583 ± 1.181
Test2   0.3	$0.047 \pm 0.002$	14.894 ± 0.817	2.377 ± 0.449	$0.133 \pm 0.009$	$0.078 \pm 0.004$	11.5 ± 2.704
Test2   0.44						
Test2   0.67						
Test2   1						

Table 2: Smooth Spline Fit

Sample Replicate Conc.	$\mu_{max}$	$t_D$	λ	$y_{max}$	ΔΥ	$t_{max}$	smooth.
Test1 1 0	0.661	1.05	4.33	6.689	6.633	8.00	0.55
Test1 1 0.017	0.629	1.1	4.66	3.966	3.915	8.25	0.55
Test1 1 0.026	0.613	1.13	4.72	3.173	3.122	8.00	0.55
Test1 1 0.039	0.573	1.21	4.48	2.581	2.528	8.00	0.55
Test1 1 0.059	0.53	1.31	4.71	2.098	2.051	8.25	0.55
Test1 1 0.088	0.476	1.46	4.16	1.821	1.769	7.75	0.55
Test1 1 0.13	0.378	1.83	4.28	1.083	1.033	8.00	0.55
Test1 1 0.2	0.271	2.56	4.02	0.759	0.709	9.00	0.55
Test1 1 0.3 Test1 1 0.44	0.157 0.074	4.41 9.43	3.63 2.06	0.455 0.212	0.403 0.154	10.75 9.50	0.55 0.55
Test1 1 0.67	0.074	20.51	0.32	0.212	0.134	2.75	0.55
Test1 1 1	0.004	20.01	0.02	0.100	0.000	2.70	0.55
Test1 2 0	0.66	1.05	4.35	6.479	6.429	8.00	0.55
Test1 2 0.017	0.631	1.1	4.43	3.791	3.737	7.75	0.55
Test1 2 0.026	0.604	1.15	4.18	3.492	3.435	7.50	0.55
Test1 2 0.039	0.555	1.25	4.69	2.760	2.702	8.00	0.55
Test1 2 0.059	0.531	1.31	4.73	1.928	1.880	8.25	0.55
Test1 2 0.088	0.468	1.48	4.50	1.540	1.488	8.25	0.55
Test1 2 0.13	0.387	1.79	4.65	1.211	1.154	8.75	0.55
Test1 2 0.2	0.264	2.63	3.85	0.840	0.784	9.25	0.55
Test1 2 0.3	0.148	4.69	3.10	0.406	0.357	9.25	0.55
Test1 2 0.44 Test1 2 0.67	0.073 0.042	9.47 16.46	2.63 2.78	0.180 0.098	0.130 0.045	11.00 9.50	0.55 0.55
Test1 2 1	0.042	10.40	2.70	0.030	0.000	9.50	0.55
Test1 3 0	0.666	1.04	4.12	7.262	7.206	7.75	0.55
Test1 3 0.026	0.595	1.16	4.51	3.035	2.986	8.00	0.55
Test1 3 0.039	0.563	1.23	4.62	2.781	2.724	8.25	0.55
Test1 3 0.059	0.527	1.31	4.66	1.942	1.895	8.25	0.55
Test1 3 0.088	0.48	1.44	4.30	1.751	1.701	8.00	0.55
Test1 3 0.13	0.386	1.79	4.50	1.282	1.225	8.50	0.55
Test1 3 0.2	0.269	2.58	4.03	0.771	0.722	9.25	0.55
Test1 3 0.3	0.139	5	2.76	0.423	0.369	9.75	0.55
Test1 3 0.44	0.071	9.76	1.90	0.224	0.166	8.00	0.55
Test1 3 0.67	0.044	15.78	0.00	0.092	0.042	0.25	0.55
Test1 3 1 Test2 1 0	0.472	1.47	3.94	3.377	0.000 3.328	8.50	0.55 0.55
Test2 1 0.017	0.472	1.62	3.97	2.591	2.534	8.25	0.55
Test2 1 0.026	0.418	1.66	4.34	2.142	2.092	8.75	0.55
Test2 1 0.039	0.383	1.81	3.87	1.666	1.614	8.25	0.55
Test2 1 0.059	0.344	2.02	3.76	1.301	1.253	8.75	0.55
Test2 1 0.088	0.295	2.35	4.07	1.282	1.229	9.25	0.55
Test2 1 0.13	0.218	3.18	3.55	0.939	0.886	9.25	0.55
Test2 1 0.2	0.12	5.76	2.74	0.445	0.390	11.50	0.55
Test2 1 0.3	0.048	14.5	2.58	0.123	0.074	12.25	0.55
Test2 1 0.44					0.000		0.55
Test2 1 0.67 Test2 1 1					0.000		0.55
Test2 1 1 Test2 2 0	0.486	1.43	4.12	4.099	0.000 4.046	8.75	0.55 0.55
Test2 2 0.017	0.444	1.56	4.02	2.708	2.652	8.25	0.55
Test2 2 0.026	0.444	1.65	3.82	2.180	2.123	8.00	0.55
Test2 2 0.039	0.409	1.69	4.13	2.080	2.026	8.75	0.55
Test2 2 0.059	0.349	1.99	4.11	1.506	1.453	8.75	0.55
Test2 2 0.088	0.291	2.38	3.91	1.160	1.108	9.50	0.55
Test2 2 0.13	0.208	3.33	3.30	0.852	0.796	9.75	0.55
Test2 2 0.2	0.124	5.58	2.92	0.474	0.422	11.00	0.55
Test2 2 0.3	0.044	15.83	2.69	0.138	0.079	13.75	0.55
Test2 2 0.44					0.000		0.55
Test2 2 0.67					0.000		0.55
Test2 2 1 Test2 3 0	0.483	1.44	3.95	3.697	0.000 3.649	8.50	0.55 0.55
Test2 3 0.026	0.463	1.64	3.87	2.135	2.086	8.75	0.55
Test2 3 0.039	0.422	1.81	3.96	1.539	1.491	8.25	0.55
Test2 3 0.059	0.359	1.93	3.82	1.545	1.492	8.00	0.55
Test2 3 0.088	0.284	2.44	3.62	1.168	1.113	9.00	0.55
Test2 3 0.13	0.213	3.26	3.39	0.820	0.768	9.50	0.55
Test2 3 0.2	0.123	5.63	2.39	0.481	0.428	9.25	0.55
Test2 3 0.3	0.048	14.35	1.86	0.137	0.081	8.50	0.55

Table 2: Smooth Spline Fit (continued)

Sample Replicate Conc.	$\mu_{max}$	$t_D$	$\lambda$	$\mathbf{y}_{max}$	$\Delta Y$	$t_{max}$	smooth. fac
Test2 3 0.44					0.000		0.55
Test2 3 0.67					0.000		0.55
Test2 3 1					0.000		0.55



#### **Nonparametric Fits**













