

附錄一、原始數據



實驗毒物：3-乙氧-4-煙基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 37.32 D (μm)： 4.146 Initial pH： 7.41 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO mg/L	μ specific	μ relative	IR (growth rate)	IR (Biomass)	IR (DO)
Control	1.19	6.23	205800	5.04	1.30943	1	0	0	0
45.68	1.54	2.47	25700	0.93	0.26922	0.20560	0.79440	0.94392	0.81548
30.46	1.46	2.57	47300	1.11	0.57423	0.43854	0.56146	0.83071	0.77976
19.8	1.39	3.8	53300	2.41	0.63394	0.48414	0.51586	0.79927	0.52183
14.47	1.36	4.83	90700	3.47	0.89975	0.68714	0.31286	0.60325	0.31151
9.14	1.33	5.86	128100	4.53	1.07238	0.81897	0.18103	0.40723	0.10119
6.86	1.29	7.39	183500	6.1	1.25208	0.95621	0.04379	0.11688	-0.21032
4.57	1.25	8.91	238800	7.66	1.38379	1.05679	-0.05679	-0.17296	-0.51984
Control	1.17	6.1	190400	4.93	1.27054	1	0	0	0
45.68	1.61	2.22	25200	0.61	0.25940	0.20416	0.79584	0.94185	0.87627
30.46	1.43	2.53	38300	1.1	0.46870	0.36890	0.63110	0.86716	0.77688
19.8	1.38	3.89	59800	2.51	0.69148	0.54424	0.45576	0.74458	0.49087
14.47	1.37	4.99	97300	3.62	0.93487	0.73581	0.26419	0.53079	0.26572
9.14	1.35	6.09	134700	4.74	1.09750	0.86381	0.13619	0.31756	0.03854
6.86	1.34	6.92	134700	5.58	1.09750	0.86381	0.13619	0.31756	-0.13185
4.57	1.35	7.74	193000	6.39	1.27732	1.00534	-0.00534	-0.01482	-0.29615
Control	1.14	6.35	221100	5.21	1.34528	1	0	0	0
45.68	1.68	2.24	35600	0.56	0.43215	0.32123	0.67877	0.90005	0.89251
30.46	1.4	2.57	39300	1.17	0.48159	0.35798	0.64202	0.88210	0.77543
19.8	1.38	4.42	60300	3.04	0.69564	0.51710	0.48290	0.78020	0.41651
14.47	1.36	5.37	90900	4.01	0.90085	0.66964	0.33036	0.63173	0.23033
9.14	1.33	6.32	121500	4.99	1.04593	0.77748	0.22252	0.48326	0.04223
6.86	1.32	6.96	172000	5.64	1.21972	0.90667	0.09333	0.23823	-0.08253
4.57	1.31	7.59	222500	6.28	1.34844	1.00235	-0.00235	-0.00679	-0.20537
Control	1.16667	6.22667	205766.67	5.06000	1.30842	1	0	0	0
45.68	1.61000	2.31000	28833.33	0.70000	0.32026	0.24367	0.75045	0.92749	0.86166
30.46	1.43000	2.55667	41633.33	1.12667	0.50817	0.38847	0.61017	0.86039	0.77734
19.8	1.38333	4.03667	57800.00	2.65333	0.67369	0.51516	0.48488	0.77564	0.47563
14.47	1.36333	5.06333	92966.67	3.70000	0.91183	0.69753	0.30340	0.59130	0.26877
9.14	1.33667	6.09000	128100.00	4.75333	1.07194	0.82009	0.18098	0.40713	0.06061
6.86	1.31667	7.09000	163400.00	5.77333	1.18977	0.90889	0.08804	0.22209	-0.14097
4.57	1.30333	8.08000	218100.00	6.77667	1.33652	1.02223	-0.02223	-0.06465	-0.33926

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 3-溴-4-煙基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 44.68 D (μm)： 4.402 Initial pH： 7.57 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO mg/L	μ specific	μ relative (growth rate)	IR (Biomass)	IR (DO)
Control	0.64	4.96	269100	4.32	1.44352	1	0	0
11.969	0.97	2.63	50100	1.66	0.60299	0.41772	0.58228	0.86187
10.373	0.81	3.16	84200	2.35	0.86257	0.59755	0.40245	0.72767
8.78	0.83	3.63	100300	2.8	0.95006	0.65816	0.34184	0.66431
7.18	0.84	3.82	106900	2.98	0.98192	0.68023	0.31977	0.63833
5.59	0.81	4.81	172000	4	1.21972	0.84497	0.15503	0.38213
3.99	0.76	6.23	225300	5.47	1.35469	0.93847	0.06153	0.17237
2.39	0.77	6.85	336300	6.08	1.55498	1.07721	-0.07721	-0.26446
Control	0.68	4.9	315500	4.22	1.52305	1	0	0
11.969	1.05	2.73	53800	1.68	0.63861	0.41930	0.58070	0.87088
10.373	0.87	3.15	83200	2.28	0.85660	0.56242	0.43758	0.77304
8.78	0.85	3.65	99200	2.8	0.94454	0.62016	0.37984	0.71980
7.18	0.85	3.75	116600	2.9	1.02535	0.67322	0.32678	0.66190
5.59	0.81	4.78	164700	3.97	1.19804	0.78660	0.21340	0.50183
3.99	0.73	6.48	222500	5.75	1.34844	0.88535	0.11465	0.30948
2.39	0.8	6.62	330600	5.82	1.54643	1.01535	-0.01535	-0.05025
Control	0.59	4.91	248500	4.32	1.40370	1	0	0
11.969	1.12	2.52	55200	1.4	0.65146	0.46410	0.53590	0.82784
10.373	0.89	3.16	85200	2.27	0.86848	0.61871	0.38129	0.69936
8.78	0.84	3.61	101000	2.77	0.95354	0.67930	0.32070	0.63169
7.18	0.75	3.89	122200	3.14	1.04880	0.74717	0.25283	0.54090
5.59	0.83	4.75	157300	3.92	1.17505	0.83711	0.16289	0.39058
3.99	0.85	6.62	228100	5.77	1.36087	0.96949	0.03051	0.08737
2.39	0.65	7.07	341900	6.42	1.56323	1.11366	-0.11366	-0.40000
Control	0.63667	4.92333	277700.00	4.28667	1.45676	1	0	0
11.969	1.04667	2.62667	53033.33	1.58000	0.63102	0.43371	0.56729	0.85522
10.373	0.85667	3.15667	84200.00	2.30000	0.86255	0.59289	0.40889	0.73658
8.78	0.84000	3.63000	100166.67	2.79000	0.94938	0.65254	0.34939	0.67580
7.18	0.81333	3.82000	115233.33	3.00667	1.01869	0.70021	0.30138	0.61845
5.59	0.81667	4.78000	164666.67	3.96333	1.19760	0.82289	0.17907	0.43028
3.99	0.78000	6.44333	225300.00	5.66333	1.35467	0.93110	0.07165	0.19947
2.39	0.74000	6.84667	336266.67	6.10667	1.55488	1.06557	-0.06557	-0.22294

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物：3,4,5-三甲氧基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 46.68 D (μm)： 4.467 Initial pH： 7.51 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO mg/L	$\mu\text{specific}$	$\mu\text{relative}$	IR (growth rate)	IR (Biomass)	IR (DO)
Control	0.57	7.15	292600	6.58	1.485378	1	0	0	0
37.46	1.14	3.06	67200	1.92	0.749812	0.50480	0.49520	0.81196	0.70821
24.97	0.96	3.49	78200	2.53	0.825610	0.55582	0.44418	0.77233	0.61550
14.98	0.91	5.32	175000	4.41	1.228368	0.82697	0.17303	0.42363	0.32979
11.74	0.78	6.11	203300	5.33	1.303316	0.87743	0.12257	0.32169	0.18997
8.24	0.81	7.4	265200	6.59	1.436217	0.96690	0.03310	0.09870	-0.00152
2.5	0.81	7.26	272900	6.45	1.450528	0.97654	0.02346	0.07097	0.01976
Control	0.61	6.75	261000	6.14	1.428235	1	0	0	0
37.46	1.19	2.84	63600	1.65	0.722282	0.50572	0.49428	0.80244	0.73127
24.97	0.9	3.48	107800	2.58	0.986114	0.69044	0.30956	0.62276	0.57980
14.98	0.81	5.17	153100	4.36	1.161521	0.81326	0.18674	0.43862	0.28990
11.74	0.87	5.52	210500	4.65	1.320718	0.92472	0.07528	0.20528	0.24267
8.24	0.78	7	262200	6.22	1.430529	1.00161	-0.00161	-0.00488	-0.01303
2.5	0.78	6.75	255700	5.97	1.417977	0.99282	0.00718	0.02154	0.02769
Control	0.57	6.76	289600	6.19	1.480225	1	0	0	0
37.46	1.26	2.97	52000	1.71	0.621597	0.41993	0.58007	0.86526	0.72375
24.97	1.03	3.68	100500	2.65	0.951054	0.64251	0.35749	0.68864	0.57189
14.98	0.88	4.78	178200	3.9	1.237428	0.83597	0.16403	0.40568	0.36995
11.74	0.79	5.35	190600	4.56	1.271063	0.85870	0.14130	0.36052	0.26333
8.24	0.75	6.06	239700	5.31	1.385669	0.93612	0.06388	0.18172	0.14216
2.5	0.7	7.89	294100	7.19	1.487935	1.00521	-0.00521	-0.01639	-0.16155
Control	0.5833	6.88667	281066.67	6.30333	1.464613	1	0	0	0
37.46	1.1967	2.95667	60933.33	1.76000	0.697897	0.47682	0.52168	0.82736	0.72078
24.97	0.9633	3.55000	95500.00	2.58667	0.920926	0.62959	0.36835	0.69744	0.58964
14.98	0.8667	5.09000	168766.67	4.22333	1.209106	0.82540	0.17405	0.42207	0.32998
11.74	0.8133	5.66000	201466.67	4.84667	1.298366	0.88695	0.11362	0.29917	0.23109
8.24	0.7800	6.82000	255700.00	6.04000	1.417472	0.96821	0.03228	0.09534	0.04178
2.5	0.7633	7.30000	274233.33	6.53667	1.452147	0.99152	0.00840	0.02568	-0.03702

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物：3,4-二甲氧基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 38.87 D (μm)： 4.203 Initial pH： 7.44 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc	Initial DO	Final DO	Final cells	Delta DO			IR	IR	IR
mg/L	mg/L	mg/L	cells/ml	mg/L	$\mu\text{specific}$	$\mu\text{relative}$	(growth rate)	(Biomass)	(DO)
Control	0.65	5.25	160700	4.6	1.18574	1	0	0	0
424.08	1.69	2.21	32900	0.52	0.39271	0.33119	0.66881	0.87714	0.88696
242.33	1.12	2.36	39200	1.24	0.48031	0.40507	0.59493	0.83391	0.73043
121.17	0.83	4.34	65700	3.51	0.73852	0.62284	0.37716	0.65202	0.23696
72.7	0.8	4.02	83500	3.22	0.85840	0.72393	0.27607	0.52986	0.30000
36.35	0.74	5.29	111400	4.55	1.00254	0.84549	0.15451	0.33837	0.01087
18.17	0.64	5.14	144300	4.5	1.13192	0.95461	0.04539	0.11256	0.02174
9.09	0.75	5.69	162900	4.94	1.19254	1.00573	-0.00573	-0.01510	-0.07391
Control	0.63	5	151400	4.37	1.15594	1	0	0	0
424.08	1.79	2.11	13300	0.32	-0.06014	-0.05203	1.05203	1.01246	0.92677
242.33	1.11	2.32	49500	1.21	0.59696	0.51643	0.48357	0.74707	0.72311
121.17	0.87	4.1	46600	3.23	0.56678	0.49032	0.50968	0.76833	0.26087
72.7	0.8	4.23	57300	3.43	0.67013	0.57972	0.42028	0.68988	0.21510
36.35	0.8	5.13	127000	4.33	1.06807	0.92398	0.07602	0.17889	0.00915
18.17	0.7	5.85	148700	5.15	1.14694	0.99222	0.00778	0.01979	-0.17849
9.09	0.69	5.65	157900	4.96	1.17696	1.01818	-0.01818	-0.04765	-0.13501
Control	0.63	5.15	173600	4.52	1.22435	1	0	0	0
424.08	1.81	2.19	13700	0.38	-0.04533	-0.03702	1.03702	1.00820	0.91593
242.33	1.29	2.44	50000	1.15	0.60199	0.49168	0.50832	0.77932	0.74558
121.17	0.8	4.09	69000	3.29	0.76303	0.62321	0.37679	0.65952	0.27212
72.7	0.73	4.41	74000	3.68	0.79801	0.65178	0.34822	0.62799	0.18584
36.35	0.71	4.74	109400	4.03	0.99348	0.81143	0.18857	0.40479	0.10841
18.17	0.7	5.43	136400	4.73	1.10377	0.90151	0.09849	0.23455	-0.04646
9.09	0.65	5.73	150100	5.08	1.15163	0.94060	0.05940	0.14817	-0.12389
Control	0.63667	5.13333	161900.00	4.49667	1.18868	1	0	0	0
424.08	1.76333	2.17000	19966.67	0.40667	0.09575	0.08071	0.87977	0.96619	0.90956
242.33	1.17333	2.37333	46233.33	1.20000	0.55975	0.47106	0.52682	0.78738	0.73314
121.17	0.83333	4.17667	60433.33	3.34333	0.68944	0.57879	0.41424	0.69072	0.25649
72.7	0.77667	4.22000	71600.00	3.44333	0.77551	0.65181	0.34296	0.61470	0.23425
36.35	0.75000	5.05333	115933.33	4.30333	1.02136	0.86030	0.14038	0.31291	0.04299
18.17	0.68000	5.47333	143133.33	4.79333	1.12754	0.94945	0.05179	0.12775	-0.06597
9.09	0.69667	5.69000	156966.67	4.99333	1.17371	0.98699	0.01301	0.03358	-0.11045

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 香草醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 38.22 D (μm)： 4.179 Initial pH： 7.57 EDTA(%)： 0
 T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO mg/L	μ specific	μ relative	IR (growth rate)	IR (Biomass)	IR (DO)
Control	0.59	4.8		4.21					0
15.546	0.96	0.52		-0.44					1.10451
14.529	0.75	1.1		0.35					0.91686
13.512	0.72	1.41		0.69					0.83610
12.423	0.76	2.15		1.39					0.66983
11.406	0.7	2.48		1.78					0.57720
10.389	0.71	3.65		2.94					0.30166
9.299	0.69	3.91		3.22					0.23515
Control	0.65	4.52		3.87					0
15.546	1.13	0.61		-0.52					1.13437
14.529	0.77	1.48		0.71					0.81654
13.512	0.68	2.21		1.53					0.60465
12.423	0.64	2.92		2.28					0.41085
11.406	0.73	3.16		2.43					0.37209
10.389	0.67	3.17		2.5					0.35401
9.299	0.66	4.38		3.72					0.03876
Control	0.59	4.84		4.25					0
15.546	1.14	1.47		0.33					0.92235
14.529	0.83	1.54		0.71					0.83294
13.512	0.77	1.62		0.85					0.80000
12.423	0.77	1.84		1.07					0.74824
11.406	0.77	2.83		2.06					0.51529
10.389	0.72	3.09		2.37					0.44235
9.299	0.6	3.88		3.28					0.22824
Control	0.61000	4.72000		4.11000					0
15.546	1.07667	0.86667		-0.21000					1.05109
14.529	0.78333	1.37333		0.59000					0.85645
13.512	0.72333	1.74667		1.02333					0.75101
12.423	0.72333	2.30333		1.58000					0.61557
11.406	0.73333	2.82333		2.09000					0.49148
10.389	0.70000	3.30333		2.60333					0.36659
9.299	0.65000	4.05667		3.40667					0.17113

IR : Inhibition rate

PS: 由於細胞密度過高，因此不顯示數據

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 香草醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 38.55 D (μm)： 4.191 Initial pH： 7.44 EDTA(%)： 0
 T($^{\circ}\text{C}$)： 24.1 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO		IR (growth rate)	IR (Biomass)	IR (DO)
				mg/L	$\mu\text{specific}$			
Control			276300		1.45672	1	0	0
73.57			39600		0.48539	0.33321	0.66679	0.90586
63.04			51800		0.61967	0.42539	0.57461	0.85917
52.53			73900		0.79733	0.54735	0.45265	0.77459
42.01			120300		1.04097	0.71460	0.28540	0.59701
31.56			176400		1.23235	0.84598	0.15402	0.38232
21.04			278700		1.46104	1.00297	-0.00297	-0.00918
10.52			348000		1.57208	1.07919	-0.07919	-0.27440
Control			264600		1.43508	1	0	0
73.57			31300		0.36778	0.25628	0.74372	0.93470
63.04			25400		0.26335	0.18351	0.81649	0.95833
52.53			47300		0.57423	0.40014	0.59986	0.87059
42.01			66900		0.74757	0.52093	0.47907	0.79207
31.56			186200		1.25939	0.87757	0.12243	0.31410
21.04			272700		1.45016	1.01051	-0.01051	-0.03245
10.52			298000		1.49452	1.04142	-0.04142	-0.13381
Control			256300		1.41915	1	0	0
73.57			32700		0.38966	0.27457	0.72543	0.92665
63.04			45300		0.55263	0.38941	0.61059	0.87443
52.53			55400		0.65326	0.46032	0.53968	0.83257
42.01			179600		1.24134	0.87471	0.12529	0.31786
31.56			216500		1.33477	0.94054	0.05946	0.16494
21.04			284700		1.47169	1.03702	-0.03702	-0.11770
10.52			398000		1.63920	1.15506	-0.15506	-0.58724
Control			265733.33		1.43698	1	0	0
73.57			34533.33		0.41428	0.28802	0.70990	0.92210
63.04			40833.33		0.47855	0.33277	0.65160	0.89697
52.53			58866.67		0.67494	0.46927	0.52435	0.82505
42.01			122266.67		1.00996	0.70341	0.27007	0.57219
31.56			193033.33		1.27550	0.88803	0.11120	0.28995
21.04			278700.00		1.46097	1.01683	-0.01657	-0.05171
10.52			348000.00		1.56860	1.09383	-0.09383	-0.32810

IR : Inhibition rate

PS: 由於 ΔDO 過低，因此不顯示數據

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 苯甲醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 40.9 D (μm)： 4.275 Initial pH： 7.48 EDTA(%): 0
 T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc	Initial DO	Final DO	Final cells	Delta DO		IR	IR	IR
mg/L	mg/L	mg/L	cells/ml	mg/L	$\mu\text{specific}$	$\mu\text{relative}$	(growth rate)	(Biomass)
							(DO)	
Control	0.6	6.78		6.18				0
7.098	0.57	0.65		0.08				0.98706
6.08	0.58	2.62		2.04				0.66990
5.061	0.55	3.29		2.74				0.55663
4.058	0.51	4.04		3.53				0.42880
3.04	0.5	6.13		5.63				0.08900
2.022	0.52	7.44		6.92				-0.11974
Control	0.48	7.05		6.57				0
7.098	0.62	0.19		-0.43				1.06545
6.08	0.52	2.62		2.1				0.68037
5.061	0.55	3.33		2.78				0.57686
4.058	0.55	4.18		3.63				0.44749
3.04	0.54	5		4.46				0.32116
2.022	0.43	6.52		6.09				0.07306
Control	0.45	7.31		6.86				0
7.098	0.66	0.11		-0.55				1.08017
6.08	0.57	2.63		2.06				0.69971
5.061	0.55	3.33		2.78				0.59475
4.058	0.55	4.34		3.79				0.44752
3.04	0.55	5.83		5.28				0.23032
2.022	0.54	6.59		6.05				0.11808
Control	0.5100	7.04667		6.53667				0
7.098	0.6167	0.31667		-0.30000				1.04589
6.08	0.5567	2.62333		2.06667				0.68383
5.061	0.5500	3.31667		2.76667				0.57675
4.058	0.5367	4.18667		3.65000				0.44161
3.04	0.5300	5.65333		5.12333				0.21622
2.022	0.4967	6.85000		6.35333				0.02805

IR : Inhibition rate

PS: 由於細胞密度過高，因此不顯示數據

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 苯甲醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 43.93 D (μm)： 4.017 Initial pH： 7.4 EDTA(%)： 0
 T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO		IR (growth rate)	IR (Biomass)	IR (DO)
				mg/L	$\mu\text{specific}$			
Control			229800		1.36458	1	0	0
147.23			28500		0.32093	0.23518	0.76482	0.93715
95.39			35800		0.43495	0.31874	0.68126	0.90317
73.61			64200		0.72698	0.53275	0.46725	0.77095
64.1			132800		1.09040	0.79907	0.20093	0.45158
47.69			173400		1.22378	0.89681	0.10319	0.26257
27.65			205200		1.30797	0.95851	0.04149	0.11453
13.82			221000		1.34506	0.98569	0.01431	0.04097
Control			180400		1.24356	1	0	0
147.23			30900		0.36135	0.29058	0.70942	0.90387
95.39			31900		0.37728	0.30338	0.69662	0.89782
73.61			44600		0.54484	0.43813	0.56187	0.82104
64.1			96200		0.92919	0.74720	0.25280	0.50907
47.69			163100		1.19316	0.95947	0.04053	0.10459
27.65			202100		1.30036	1.04567	-0.04567	-0.13120
13.82			207800		1.31426	1.05685	-0.05685	-0.16566
Control			187500		1.26286	1	0	0
147.23			26000		0.27502	0.21778	0.78222	0.93623
95.39			33900		0.40768	0.32282	0.67718	0.89043
73.61			54400		0.64416	0.51008	0.48992	0.77159
64.1			63000		0.71754	0.56819	0.43181	0.72174
47.69			183700		1.25263	0.99189	0.00811	0.02203
27.65			151700		1.15693	0.91611	0.08389	0.20754
13.82			174900		1.22808	0.97246	0.02754	0.07304
Control			199233.33		1.29034	1	0	0
147.23			28466.67		0.31910	0.24785	0.75229	0.92690
95.39			33866.67		0.40664	0.31498	0.68513	0.89759
73.61			54400.00		0.63866	0.49365	0.50189	0.78614
64.1			97333.33		0.91238	0.70482	0.27696	0.55310
47.69			173400.00		1.22319	0.94939	0.05369	0.14022
27.65			186333.33		1.25508	0.97343	0.02588	0.07002
13.82			201233.33		1.29580	1.00386	-0.00386	-0.01086

IR : Inhibition rate

PS: 由於 ΔDO 過低，因此不顯示數據

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 4-硝基苯甲醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 47.44 D (μm)： 4.491 Initial pH： 7.44 EDTA(%)： 0
 T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO			IR (growth rate)	IR (Biomass)	IR (DO)
				mg/L	$\mu\text{specific}$	$\mu\text{relative}$			
Control	0.73	6.06	219300	5.33	1.34120	1	0	0	0
10.307	0.87	0.99	38500	0.12	0.47130	0.35141	0.64859	0.88497	0.97749
8.246	0.84	0.94	43300	0.1	0.53005	0.39521	0.60479	0.86148	0.98124
6.184	0.8	0.81	56400	0.01	0.66221	0.49375	0.50625	0.79736	0.99812
4.123	0.81	1.64	93900	0.83	0.91709	0.68379	0.31621	0.61380	0.84428
3.092	0.76	4.21	131500	3.45	1.08548	0.80934	0.19066	0.42976	0.35272
2.061	0.71	6.78	210300	6.07	1.32024	0.98438	0.01562	0.04405	-0.13884
1.031	0.74	8.13	287000	7.39	1.47572	1.10030	-0.10030	-0.33138	-0.38649
Control	0.67	6.86	249300	6.19	1.40530	1	0	0	0
10.307	0.91	0.82	36500	-0.09	0.44463	0.31640	0.68360	0.90824	1.01454
8.246	0.87	0.79	36800	-0.08	0.44872	0.31931	0.68069	0.90696	1.01292
6.184	0.77	0.87	42100	0.1	0.51600	0.36718	0.63282	0.88434	0.98384
4.123	0.8	1.97	89000	1.17	0.89029	0.63352	0.36648	0.68417	0.81099
3.092	0.77	4.36	135900	3.59	1.10193	0.78413	0.21587	0.48399	0.42003
2.061	0.74	6.75	212100	6.01	1.32450	0.94250	0.05750	0.15877	0.02908
1.031	0.72	8.84	298500	8.12	1.49536	1.06408	-0.06408	-0.20999	-0.31179
Control	0.71	6.46	234300	5.75	1.37428	1	0	0	0
10.307	0.95	0.91	33700	-0.04	0.40472	0.29450	0.70550	0.91473	1.00696
8.246	0.81	0.71	44600	-0.1	0.54484	0.39646	0.60354	0.86503	1.01739
6.184	0.85	1.01	43000	0.16	0.52657	0.38317	0.61683	0.87232	0.97217
4.123	0.77	1.77	88800	1	0.88917	0.64701	0.35299	0.66347	0.82609
3.092	0.75	4.29	134600	3.54	1.09713	0.79833	0.20167	0.45463	0.38435
2.061	0.72	6.81	219300	6.09	1.34120	0.97593	0.02407	0.06840	-0.05913
1.031	0.75	8.24	275200	7.49	1.45472	1.05854	-0.05854	-0.18650	-0.30261
Control	0.70333	6.46000	234300.00	5.75667	1.37359	1	0	0	0
10.307	0.91000	0.90667	36233.33	-0.00333	0.44022	0.32077	0.67913	0.90318	1.00058
8.246	0.84000	0.81333	41566.67	-0.02667	0.50787	0.37032	0.62917	0.87886	1.00463
6.184	0.80667	0.89667	47166.67	0.09000	0.56826	0.41470	0.58319	0.85332	0.98437
4.123	0.79333	1.79333	90566.67	1.00000	0.89885	0.65477	0.34582	0.65542	0.82629
3.092	0.76000	4.28667	134000.00	3.52667	1.09485	0.79726	0.20329	0.45736	0.38738
2.061	0.72333	6.78000	213900.00	6.05667	1.32865	0.96760	0.03314	0.09302	-0.05211
1.031	0.73667	8.40333	286900.00	7.66667	1.47527	1.07369	-0.07369	-0.23985	-0.33179

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 2,4-二烴基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 38.52 D (μm)： 4.19 Initial pH： 7.52 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO		μ relative (growth rate)	IR (Biomass)	IR (DO)
				mg/L	μ specific			
Control	0.53	5.78	268100	5.25	1.441655	1	0	0
19.96	0.82	1.36	57200	0.54	0.669252	0.46422	0.53578	0.89714
18.08	0.81	1.7	64100	0.89	0.726197	0.50372	0.49628	0.83048
15.9	0.79	2.36	80600	1.57	0.840724	0.58317	0.41683	0.74081
14.03	0.83	3.34	112900	2.51	1.009226	0.70005	0.29995	0.61320
11.85	0.83	4.99	218900	4.16	1.340282	0.92968	0.07032	0.19439
9.98	0.77	5.12	267000	4.35	1.439599	0.99857	0.00143	0.00435
Control	0.6	5.9	282300	5.3	1.467460	1	0	0
19.96	0.77	1.34	55300	0.57	0.652361	0.44455	0.55545	0.84923
18.08	0.77	1.8	61600	1.03	0.706306	0.48131	0.51869	0.82566
15.9	0.78	2.26	80000	1.48	0.836988	0.57037	0.42963	0.75683
14.03	0.82	3.52	112800	2.7	1.008783	0.68743	0.31257	0.63412
11.85	0.83	4.97	221500	4.14	1.346186	0.91736	0.08264	0.22746
9.98	0.76	5.43	261300	4.67	1.428809	0.97366	0.02634	0.07856
Control	0.56	5.57	296500	5.01	1.491999	1	0	0
19.96	0.91	1.39	56800	0.48	0.665743	0.44621	0.55379	0.85151
18.08	0.76	1.7	62900	0.94	0.716748	0.48039	0.51961	0.82984
15.9	0.74	2.27	80300	1.53	0.838860	0.56224	0.43776	0.76803
14.03	0.8	3.36	112700	2.56	1.008340	0.67583	0.32417	0.65293
11.85	0.8	4.98	216300	4.18	1.334308	0.89431	0.10569	0.28490
9.98	0.75	5.55	264200	4.8	1.434328	0.96135	0.03865	0.11474
Control	0.5633	5.75000	282300.00	5.18667	1.467038	1	0	0
19.96	0.8333	1.36333	56433.33	0.53000	0.662452	0.45166	0.54854	0.84499
18.08	0.7800	1.73333	62866.67	0.95333	0.716417	0.48848	0.51175	0.82093
15.9	0.7700	2.29667	80300.00	1.52667	0.838857	0.57192	0.42836	0.75571
14.03	0.8167	3.40667	112800.00	2.59000	1.008783	0.68777	0.31257	0.63412
11.85	0.8200	4.98000	218900.00	4.16000	1.340259	0.91378	0.08667	0.23719
9.98	0.7600	5.36667	264166.67	4.60667	1.434246	0.97786	0.02262	0.06784

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 2-氯-6-氟-苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 41.07 D (μm)： 4.281 Initial pH： 7.57 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO			IR		
				mg/L	$\mu\text{specific}$	$\mu\text{relative}$	(growth rate)	(Biomass)	(DO)
Control	0.84	10.87	613700	10.03	1.855728	1	0	0	0
9.595	1.05	2.26	49200	1.21	0.593922	0.32005	0.67995	0.94288	0.87936
7.676	0.96	2.73	60300	1.77	0.695641	0.37486	0.62514	0.92434	0.82353
5.757	0.93	3.15	82200	2.22	0.850553	0.45834	0.54166	0.88776	0.77866
3.838	0.94	5.01	161900	4.07	1.189464	0.64097	0.35903	0.75464	0.59422
1.919	0.98	9.4	367100	8.42	1.598792	0.86154	0.13846	0.41189	0.16052
0.959	0.93	11.79	588600	10.86	1.834848	0.98875	0.01125	0.04192	-0.08275
Control	0.71	11.14	606200	10.43	1.849580	1	0	0	0
9.595	1.1	1.98	50000	0.88	0.601986	0.32547	0.67453	0.94080	0.91563
7.676	1	2.28	64000	1.28	0.725416	0.39221	0.60779	0.91712	0.87728
5.757	0.98	3.19	85200	2.21	0.868476	0.46955	0.53045	0.88126	0.78811
3.838	0.94	5.52	157500	4.58	1.175688	0.63565	0.36435	0.75896	0.56088
1.919	0.98	9.41	384300	8.43	1.621687	0.87679	0.12321	0.37534	0.19175
0.959	0.87	11.56	573200	10.69	1.821592	0.98487	0.01513	0.05582	-0.02493
Control	0.76	11.19	621100	10.43	1.861721	1	0	0	0
9.595	1.19	2.07	48300	0.88	0.584691	0.31406	0.68594	0.94506	0.91563
7.676	1.01	2.25	67600	1.24	0.752779	0.40435	0.59565	0.91322	0.88111
5.757	1.12	3.38	83700	2.26	0.859594	0.46172	0.53828	0.88665	0.78332
3.838	0.97	5.91	132400	4.94	1.088889	0.58488	0.41512	0.80630	0.52637
1.919	0.99	9.38	367900	8.39	1.599880	0.85936	0.14064	0.41775	0.19559
0.959	1.01	11.7	580900	10.69	1.828264	0.98203	0.01797	0.06633	-0.02493
Control	0.7700	11.06667	613666.67	10.29667	1.855676	1	0	0	0
9.595	1.1133	2.10333	49166.67	0.99000	0.593533	0.31986	0.68013	0.94293	0.90385
7.676	0.9900	2.42000	63966.67	1.43000	0.724612	0.39047	0.60923	0.91821	0.86112
5.757	1.0100	3.24000	83700.00	2.23000	0.859541	0.46320	0.53678	0.88524	0.78343
3.838	0.9500	5.48000	150600.00	4.53000	1.151347	0.62050	0.37852	0.77350	0.56005
1.919	0.9833	9.39667	373100.00	8.41333	1.606786	0.86590	0.13407	0.40184	0.18291
0.959	0.9367	11.68333	580900.00	10.74667	1.828235	0.98522	0.01479	0.05473	-0.04370

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物：2,4-二甲氧基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 38.25 D (μm)： 4.18 Initial pH： 7.45 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc	Initial DO	Final DO	Final cells	Delta DO		IR			
mg/L	mg/L	mg/L	cells/ml	mg/L	$\mu\text{specific}$	$\mu\text{relative}$ (growth rate)	(Biomass)	(DO)	
Control	0.53	4.37	215000	3.84	1.331294	1	0	0	0
19.9	0.73	1.88	54100	1.15	0.641392	0.48178	0.51822	0.80450	0.70052
18.06	0.76	2.16	82600	1.4	0.852980	0.64071	0.35929	0.66200	0.63542
15.92	0.69	3.15	106100	2.46	0.978166	0.73475	0.26525	0.54450	0.35938
14.08	0.69	3.35	123000	2.66	1.052067	0.79026	0.20974	0.46000	0.30729
11.94	0.81	4.94	144200	4.13	1.131576	0.84998	0.15002	0.35400	-0.07552
10.1	0.82	5.29	192700	4.47	1.276542	0.95887	0.04113	0.11150	-0.16406
Control	0.61	4.79	235000	4.18	1.375768	1	0	0	0
19.9	0.76	1.82	53400	1.06	0.634880	0.46147	0.53853	0.82545	0.74641
18.06	0.76	2.23	82800	1.47	0.854189	0.62088	0.37912	0.69182	0.64833
15.92	0.72	3.01	101000	2.29	0.953535	0.69309	0.30691	0.60909	0.45215
14.08	0.73	3.35	138000	2.62	1.109602	0.80653	0.19347	0.44091	0.37321
11.94	0.82	3.39	142900	2.57	1.127047	0.81921	0.18079	0.41864	0.38517
10.1	0.78	4.82	185800	4.04	1.258310	0.91462	0.08538	0.22364	0.03349
Control	0.59	4.52	232700	3.93	1.370850	1	0	0	0
19.9	0.87	1.86	50800	0.99	0.609923	0.44492	0.55508	0.83555	0.74809
18.06	0.72	2.16	82700	1.44	0.853585	0.62267	0.37733	0.68902	0.63359
15.92	0.72	2.83	95800	2.11	0.927106	0.67630	0.32370	0.62885	0.46310
14.08	0.72	3.73	121900	3.01	1.047575	0.76418	0.23582	0.50896	0.23410
11.94	0.76	4.12	145400	3.36	1.135719	0.82848	0.17152	0.40101	0.14504
10.1	0.77	4.1	201600	3.33	1.299118	0.94767	0.05233	0.14286	0.15267
Control	0.5767	4.56000	227566.67	3.98333	1.359304	1	0	0	0
19.9	0.7867	1.85333	52766.67	1.06667	0.628732	0.46273	0.53746	0.82233	0.73222
18.06	0.7467	2.18333	82700.00	1.43667	0.853584	0.62809	0.37222	0.68151	0.63933
15.92	0.7100	2.99667	100966.67	2.28667	0.952936	0.70138	0.29884	0.59558	0.42594
14.08	0.7133	3.47667	127633.33	2.76333	1.069748	0.78699	0.21265	0.47013	0.30628
11.94	0.7967	4.15000	144166.67	3.35333	1.131447	0.83256	0.16786	0.39235	0.15816
10.1	0.7900	4.73667	193366.67	3.94667	1.277990	0.94039	0.05989	0.16089	0.00921

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 3,4-二煙基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 43.76 D (μm)： 4.372 Initial pH： 7.43 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO mg/L	μ specific	μ relative	IR (growth rate)	IR (Biomass)	IR (DO)
Control	0.65	7.39		6.74					0
5.611	0.81	1.35		0.54					0.91988
4.81	0.81	3.44		2.63					0.60979
4.008	0.71	4.05		3.34					0.50445
3.206	0.74	4.94		4.2					0.37685
2.404	0.62	7.17		6.55					0.02819
1.202	0.62	9.81		9.19					-0.36350
0.401	0.6	9.7		9.1					-0.35015
Control	0.5	7.01		6.51					0
5.611	0.87	1.54		0.67					0.89708
4.81	0.79	3.67		2.88					0.55760
4.008	0.72	4.22		3.5					0.46237
3.206	0.64	5.31		4.67					0.28264
2.404	0.65	7.35		6.7					-0.02919
1.202	0.72	9.87		9.15					-0.40553
0.401	0.61	9.97		9.36					-0.43779
Control	0.46	7.77		7.31					0
5.611	1.15	1.72		0.57					0.92202
4.81	0.8	3.2		2.4					0.67168
4.008	0.72	4.14		3.42					0.53215
3.206	0.75	5.13		4.38					0.40082
2.404	0.66	6.98		6.32					0.13543
1.202	0.63	9.75		9.12					-0.24761
0.401	0.57	9.84		9.27					-0.26813
Control	0.53667	7.39000		6.85333					0
5.611	0.94333	1.53667		0.59333					0.91342
4.81	0.80000	3.43667		2.63667					0.61527
4.008	0.71667	4.13667		3.42000					0.50097
3.206	0.71000	5.12667		4.41667					0.35554
2.404	0.64333	7.16667		6.52333					0.04815
1.202	0.65667	9.81000		9.15333					-0.33560
0.401	0.59333	9.83667		9.24333					-0.34874

IR : Inhibition rate

PS: 由於細胞密度過高，因此不顯示數據

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 3,4-二烴基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 40.93 D (μm)： 4.276 Initial pH： 7.46 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc	Initial DO	Final DO	Final cells	Delta DO			IR	IR	IR
mg/L	mg/L	mg/L	cells/ml	mg/L	$\mu\text{specific}$	$\mu\text{relative}$	(growth rate)	(Biomass)	(DO)
Control	0.59	6.35	217000	5.76	1.335924	1	0	0	0
33.74	0.78	0.09	44800	-0.69	0.547079	0.40951	0.59049	0.85248	1.11979
16.87	0.72	0.04	84300	-0.68	0.863166	0.64612	0.35388	0.65693	1.11806
8.44	0.67	0.04	123800	-0.63	1.055309	0.78995	0.21005	0.46139	1.10938
6.75	0.57	0.03	163200	-0.54	1.193463	0.89336	0.10664	0.26634	1.09375
3.37	0.55	2.57	265000	2.02	1.435840	1.07479	-0.07479	-0.23762	0.64931
1.69	0.55	5.02	288500	4.47	1.478322	1.10659	-0.10659	-0.35396	0.22396
Control	0.54	7.01	220700	6.47	1.344377	1	0	0	0
33.74	0.87	0.06	42900	-0.81	0.525411	0.39082	0.60918	0.86437	1.12519
16.87	0.7	0.04	77700	-0.66	0.822403	0.61174	0.38826	0.69519	1.10201
8.44	0.63	0.04	112400	-0.59	1.007007	0.74905	0.25095	0.52649	1.09119
6.75	0.62	0.03	157400	-0.59	1.175370	0.87429	0.12571	0.30773	1.09119
3.37	0.59	2.42	262300	1.83	1.430719	1.06422	-0.06422	-0.20224	0.71716
1.69	0.58	5.33	284700	4.75	1.471693	1.09470	-0.09470	-0.31113	0.26584
Control	0.49	7.18	221800	6.69	1.346863	1	0	0	0
33.74	0.9	0.04	45800	-0.86	0.558117	0.41438	0.58562	0.85106	1.12855
16.87	0.66	0.04	80900	-0.62	0.842582	0.62559	0.37441	0.68133	1.09268
8.44	0.6	0.03	115900	-0.57	1.022339	0.75905	0.24095	0.51209	1.08520
6.75	0.55	0.03	157100	-0.52	1.174416	0.87196	0.12804	0.31286	1.07773
3.37	0.59	3.11	267600	2.52	1.440722	1.06969	-0.06969	-0.22147	0.62332
1.69	0.58	5.07	287600	4.49	1.476760	1.09644	-0.09644	-0.31818	0.32885
Control	0.5400	6.84667	219833.33	6.30667	1.342388	1	0	0	0
33.74	0.8500	0.06333	44500.00	-0.78667	0.543536	0.40491	0.59497	0.85598	1.12474
16.87	0.6933	0.04000	80966.67	-0.65333	0.842717	0.62781	0.37203	0.67795	1.10359
8.44	0.6333	0.03667	117366.67	-0.59667	1.028218	0.76602	0.23375	0.50024	1.09461
6.75	0.5800	0.03000	159233.33	-0.55000	1.181083	0.87987	0.12012	0.29585	1.08721
3.37	0.5767	2.70000	264966.67	2.12333	1.435760	1.06957	-0.06955	-0.22034	0.66332
1.69	0.5700	5.14000	286933.33	4.57000	1.475592	1.09925	-0.09922	-0.32758	0.27537

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 4-氯苯甲醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 43.33 D (μm)： 4.358 Initial pH： 7.51 EDTA(%)： 0
 T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO			IR (growth rate)	IR (Biomass)	IR (DO)
				mg/L	$\mu\text{specific}$	$\mu\text{relative}$			
Control	0.68	4.7	271200	4.02	1.44740	1	0	0	0
23.1	1.08	1.9	37700	0.82	0.46080	0.31837	0.68163	0.91140	0.79602
20.02	0.78	1.83	57900	1.05	0.67533	0.46658	0.53342	0.83255	0.73881
16.94	0.9	2.66	78100	1.76	0.82497	0.56997	0.43003	0.75371	0.56219
13.86	0.86	3.49	117700	2.63	1.03004	0.71165	0.28835	0.59914	0.34577
11.09	0.71	4.99	154400	4.28	1.16575	0.80541	0.19459	0.45589	-0.06468
8.01	0.76	6.71	217300	5.95	1.33661	0.92346	0.07654	0.21038	-0.48010
4.93	0.78	8.89	257300	8.11	1.42110	0.98182	0.01818	0.05425	-1.01741
Control	0.59	4.85	286500	4.26	1.47484	1	0	0	0
23.1	1.09	1.94	41000	0.85	0.50276	0.34089	0.65911	0.90424	0.80047
20.02	0.88	2.04	60800	1.16	0.69977	0.47447	0.52553	0.83131	0.72770
16.94	0.77	2.63	80500	1.86	0.84010	0.56962	0.43038	0.75875	0.56338
13.86	0.77	3.21	118700	2.44	1.03427	0.70128	0.29872	0.61805	0.42723
11.09	0.62	4.46	157700	3.84	1.17632	0.79759	0.20241	0.47440	0.09859
8.01	0.73	7.03	240400	6.3	1.38713	0.94052	0.05948	0.16980	-0.47887
4.93	0.7	7.96	322000	7.26	1.53325	1.03960	-0.03960	-0.13076	-0.70423
Control	0.6	5.79	307800	5.19	1.51070	1	0	0	0
23.1	1.15	1.98	34200	0.83	0.41209	0.27278	0.72722	0.93443	0.84008
20.02	0.99	2.02	56100	1.03	0.65954	0.43658	0.56342	0.85963	0.80154
16.94	0.79	2.68	77900	1.89	0.82369	0.54524	0.45476	0.78518	0.63584
13.86	0.8	3.33	114400	2.53	1.01583	0.67242	0.32758	0.66052	0.51252
11.09	0.71	4.67	152100	3.96	1.15824	0.76669	0.23331	0.53176	0.23699
8.01	0.7	7.12	243700	6.42	1.39394	0.92271	0.07729	0.21892	-0.23699
4.93	0.7	8.53	328500	7.83	1.54324	1.02154	-0.02154	-0.07070	-0.50867
Control	0.62333	5.11333	288500.00	4.49000	1.47765	1	0	0	0
23.1	1.10667	1.94000	37633.33	0.83333	0.45855	0.31068	0.68889	0.91725	0.81440
20.02	0.88333	1.96333	58266.67	1.08000	0.67822	0.45921	0.54104	0.84180	0.75947
16.94	0.82000	2.65667	78833.33	1.83667	0.82959	0.56161	0.43879	0.76661	0.59094
13.86	0.81000	3.34333	116933.33	2.53333	1.02671	0.69512	0.30544	0.62730	0.43578
11.09	0.68000	4.70667	154733.33	4.02667	1.16677	0.78990	0.21071	0.48909	0.10319
8.01	0.73000	6.95333	233800.00	6.22333	1.37256	0.92890	0.07110	0.20000	-0.38604
4.93	0.72667	8.46000	302600.00	7.73333	1.49920	1.01614	-0.01614	-0.05155	-0.72235

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物：2,5-二甲氧基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 44.36 D (μm)： 4.392 Initial pH： 7.42 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc	Initial DO	Final DO	Final cells	Delta DO			IR	IR	IR
mg/L	mg/L	mg/L	cells/ml	mg/L	$\mu\text{specific}$	$\mu\text{relative}$ (growth rate)	(Biomass)	(DO)	
Control	0.58	4.98	262800	4.4	1.431672	1	0	0	0
51.68	0.8	1.74	55500	0.94	0.654166	0.45692	0.54308	0.83656	0.78636
43.93	0.78	2.13	63400	1.35	0.720707	0.50340	0.49660	0.80468	0.69318
36.18	0.68	2.56	90200	1.88	0.896990	0.62653	0.37347	0.69653	0.57273
27.91	0.74	3.77	131700	3.03	1.086238	0.75872	0.24128	0.52906	0.31136
20.16	0.75	4.83	183300	4.08	1.251537	0.87418	0.12582	0.32082	0.07273
11.89	0.64	5.71	221300	5.07	1.345735	0.93997	0.06003	0.16747	-0.15227
Control	0.49	5.01	259900	4.52	1.426123	1	0	0	0
51.68	0.81	1.65	55300	0.84	0.652361	0.45744	0.54256	0.83544	0.81416
43.93	0.77	2.02	68700	1.25	0.760849	0.53351	0.46649	0.78073	0.72345
36.18	0.76	2.66	85500	1.9	0.870233	0.61021	0.38979	0.71213	0.57965
27.91	0.71	3.86	121500	3.15	1.045932	0.73341	0.26659	0.56513	0.30310
20.16	0.72	4.74	182800	4.02	1.250171	0.87662	0.12338	0.31482	0.11062
11.89	0.67	5.82	249100	5.15	1.404902	0.98512	0.01488	0.04410	-0.13938
Control	0.48	4.94	243300	4.46	1.393123	1	0	0	0
51.68	0.85	1.81	51400	0.96	0.615794	0.44202	0.55798	0.84056	0.78475
43.93	0.76	1.91	68900	1.15	0.762303	0.54719	0.45281	0.76391	0.74215
36.18	0.7	2.56	94800	1.86	0.921860	0.66172	0.33828	0.65046	0.58296
27.91	0.73	3.85	111000	3.12	1.000740	0.71834	0.28166	0.57950	0.30045
20.16	0.66	4.92	180500	4.26	1.243840	0.89284	0.10716	0.27508	0.04484
11.89	0.73	5.77	238400	5.04	1.382950	0.99270	0.00730	0.02146	-0.13004
Control	0.5167	4.97667	255333.33	4.46000	1.416972	1	0	0	0
51.68	0.8200	1.73333	54066.67	0.91333	0.640774	0.45213	0.54766	0.83745	0.79522
43.93	0.7700	2.02000	67000.00	1.25000	0.747953	0.52803	0.47199	0.78363	0.71973
36.18	0.7133	2.59333	90166.67	1.88000	0.896361	0.63282	0.36723	0.68724	0.57848
27.91	0.7267	3.82667	121400.00	3.10000	1.044303	0.73682	0.26229	0.55728	0.30493
20.16	0.7100	4.83000	182200.00	4.12000	1.248516	0.88121	0.11906	0.30430	0.07623
11.89	0.6800	5.76667	236266.67	5.08667	1.377862	0.97260	0.02738	0.07933	-0.14051

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 2,5-二煙基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 47.46 D (μm)： 4.492 Initial pH： 7.59 EDTA(%): 0

T($^{\circ}\text{C}$): 24 Test duration : 48-h

Conc	Initial DO	Final DO	Final cells	Delta DO			IR	IR	IR
mg/L	mg/L	mg/L	cells/ml	mg/L	$\mu\text{specific}$	$\mu\text{relative}$	(growth rate)	(Biomass)	(DO)
Control	0.72	5.83	283100	5.11	1.468875	1	0	0	0
11.66	1.12	1.51	54500	0.39	0.645075	0.43916	0.56084	0.85267	0.92368
8.75	1.04	1.88	98900	0.84	0.943030	0.64201	0.35799	0.68706	0.83562
5.83	0.99	2.48	162800	1.49	1.192236	0.81167	0.18833	0.44871	0.70841
2.92	0.9	3.7	213100	2.8	1.326856	0.90331	0.09669	0.26110	0.45205
0.972	0.96	5.73	266200	4.77	1.438099	0.97905	0.02095	0.06304	0.06654
0.486	0.83	6.57	298700	5.74	1.495695	1.01826	-0.01826	-0.05819	-0.12329
Control	0.69	5.79	320800	5.1	1.531384	1	0	0	0
33.74	1.19	1.55	56700	0.36	0.664862	0.43416	0.56584	0.86364	0.92941
16.87	0.94	1.97	91400	1.03	0.903598	0.59005	0.40995	0.75016	0.79804
8.44	0.96	2.42	145800	1.46	1.137093	0.74253	0.25747	0.57227	0.71373
6.75	0.84	3.5	212400	2.66	1.325211	0.86537	0.13463	0.35448	0.47843
3.37	0.85	5.62	272600	4.77	1.449978	0.94684	0.05316	0.15762	0.06471
1.69	0.87	6.13	302200	5.26	1.501519	0.98050	0.01950	0.06082	-0.03137
Control	0.72	5.81	258100	5.09	1.422648	1	0	0	0
33.74	1.32	1.58	52900	0.26	0.630177	0.44296	0.55704	0.84410	0.94892
16.87	1.12	1.97	106400	0.85	0.979578	0.68856	0.31144	0.62402	0.83301
8.44	0.94	2.45	138100	1.51	1.109964	0.78021	0.21979	0.49362	0.70334
6.75	0.89	3.94	226900	3.05	1.358230	0.95472	0.04528	0.12834	0.40079
3.37	0.91	5.22	259700	4.31	1.425738	1.00217	-0.00217	-0.00658	0.15324
1.69	0.85	5.7	305700	4.85	1.507277	1.05949	-0.05949	-0.19580	0.04715
Control	0.7100	5.81000	287333.33	5.10000	1.474302	1	0	0	0
11.66	1.2100	1.54667	54700.00	0.33667	0.646705	0.43876	0.56180	0.85422	0.93399
8.75	1.0333	1.94000	98900.00	0.90667	0.942068	0.64021	0.36122	0.69192	0.82222
5.83	0.9633	2.45000	148900.00	1.48667	1.146431	0.77813	0.22264	0.50832	0.70850
2.92	0.8767	3.71333	217466.67	2.83667	1.336765	0.90780	0.09436	0.25655	0.44379
0.972	0.9067	5.52333	266166.67	4.61667	1.437938	0.97602	0.02592	0.07772	0.09477
0.486	0.8500	6.13333	302200.00	5.28333	1.501497	1.01941	-0.01709	-0.05459	-0.03595

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物：5-溴-2-煙基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 41 D (μm)： 4.278 Initial pH： 7.58 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO			IR (growth rate)	IR (Biomass)	IR (DO)
				mg/L	$\mu\text{specific}$	$\mu\text{relative}$			
Control	0.72	4.95	167200	4.23	1.205570	1	0	0	0
2.59	0.67	1.53	31100	0.86	0.364579	0.30241	0.69759	0.89422	0.79669
1.49	0.63	2.44	41800	1.81	0.512423	0.42505	0.57495	0.82392	0.57210
1.25	0.7	3.19	79000	2.49	0.830699	0.68905	0.31095	0.57950	0.41135
1.01	0.76	3.94	116100	3.18	1.023201	0.84873	0.15127	0.33574	0.24823
0.71	0.76	5.43	176900	4.67	1.233767	1.02339	-0.02339	-0.06373	-0.10402
0.4	0.71	5.97	214900	5.26	1.331061	1.10409	-0.10409	-0.31340	-0.24350
Control	0.72	5.02	183100	4.3	1.250991	1	0	0	0
2.59	0.84	1.62	30500	0.78	0.354838	0.28365	0.71635	0.90779	0.81860
1.49	0.76	2.45	48600	1.69	0.587787	0.46986	0.53014	0.80012	0.60698
1.25	0.79	3.45	96800	2.66	0.932298	0.74525	0.25475	0.51338	0.38140
1.01	0.82	4.44	145000	3.62	1.134342	0.90675	0.09325	0.22665	0.15814
0.71	0.66	5.32	169700	4.66	1.212991	0.96962	0.03038	0.07971	-0.08372
0.4	0.8	6.15	235300	5.35	1.376406	1.10025	-0.10025	-0.31053	-0.24419
Control	0.67	4.88	199600	4.21	1.294133	1	0	0	0
2.59	0.8	1.63	30400	0.83	0.353196	0.27292	0.72708	0.91658	0.80285
1.49	0.8	2.42	45200	1.62	0.551523	0.42617	0.57383	0.83640	0.61520
1.25	0.8	3.43	94300	2.63	0.919215	0.71029	0.28971	0.57042	0.37530
1.01	0.79	4.43	150900	3.64	1.154284	0.89194	0.10806	0.26381	0.13539
0.71	0.67	5.24	168500	4.57	1.209443	0.93456	0.06544	0.16847	-0.08551
0.4	0.65	6.09	254300	5.44	1.415232	1.09358	-0.09358	-0.29632	-0.29216
Control	0.7033	4.95000	183300.00	4.24667	1.250231	1	0	0	0
2.59	0.7700	1.59333	30666.67	0.82333	0.357538	0.28633	0.71430	0.90691	0.80612
1.49	0.7300	2.43667	45200.00	1.70667	0.550578	0.44036	0.55932	0.82056	0.59812
1.25	0.7633	3.35667	90033.33	2.59333	0.894071	0.71486	0.28403	0.55417	0.38932
1.01	0.7900	4.27000	137333.33	3.48000	1.103942	0.88247	0.11534	0.27312	0.18053
0.71	0.6967	5.33000	171700.00	4.63333	1.218734	0.97586	0.02612	0.06892	-0.09105
0.4	0.7200	6.07000	234833.33	5.35000	1.374233	1.09931	-0.09898	-0.30620	-0.25981

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 4-二甲氨基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 42.59 D (μm)： 4.333 Initial pH： 7.54 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO			IR (growth rate)	IR (Biomass)	IR (DO)
				mg/L	$\mu\text{specific}$	$\mu\text{relative}$			
Control	0.88	5.52	259100	4.64	1.42458	1	0	0	0
31.55	1.02	2.82	64600	1.8	0.73008	0.51249	0.48751	0.79680	0.61207
28.4	1.03	3.28	71700	2.25	0.78222	0.54909	0.45091	0.76772	0.51509
25.24	0.93	3.68	86500	2.75	0.87605	0.61495	0.38505	0.70709	0.40733
22.09	0.99	4.41	140700	3.42	1.11929	0.78570	0.21430	0.48505	0.26293
18.93	0.94	4.97	135200	4.03	1.09935	0.77170	0.22830	0.50758	0.13147
12.62	0.91	5.71	174700	4.8	1.22751	0.86166	0.13834	0.34576	-0.03448
10.09	0.91	7.12	250000	6.21	1.40671	0.98745	0.01255	0.03728	-0.33836
Control	0.73	5.55	274300	4.82	1.45309	1	0	0	0
31.55	1.07	2.89	65200	1.82	0.73470	0.50562	0.49438	0.80640	0.62241
28.4	1.01	3.05	76200	2.04	0.81266	0.55926	0.44074	0.76398	0.57676
25.24	0.97	3.98	101800	3.01	0.95748	0.65893	0.34107	0.66525	0.37552
22.09	1.01	4.7	128500	3.69	1.07394	0.73907	0.26093	0.56228	0.23444
18.93	0.94	5.1	184800	4.16	1.25561	0.86410	0.13590	0.34516	0.13693
12.62	0.9	5.88	192500	4.98	1.27602	0.87815	0.12185	0.31546	-0.03320
10.09	1.05	7.49	219100	6.44	1.34074	0.92268	0.07732	0.21288	-0.33610
Control	0.64	5.5	262000	4.86	1.43015	1	0	0	0
31.55	1.09	2.86	64000	1.77	0.72542	0.50723	0.49277	0.80162	0.63580
28.4	1.04	3.21	81100	2.17	0.84382	0.59002	0.40998	0.73239	0.55350
25.24	0.97	3.85	81000	2.88	0.84320	0.58959	0.41041	0.73279	0.40741
22.09	0.93	4.39	105100	3.46	0.97343	0.68065	0.31935	0.63522	0.28807
18.93	0.94	4.96	144800	4.02	1.13365	0.79268	0.20732	0.47449	0.17284
12.62	0.95	5.87	188300	4.92	1.26499	0.88452	0.11548	0.29838	-0.01235
10.09	1.02	7.06	224200	6.04	1.35224	0.94553	0.05447	0.15304	-0.24280
Control	0.75000	5.52333	265133.33	4.77333	1.43594	1	0	0	0
31.55	1.06000	2.85667	64600.00	1.79667	0.73007	0.50845	0.49162	0.80171	0.62360
28.4	1.02667	3.18000	76333.33	2.15333	0.81290	0.56612	0.43351	0.75480	0.54888
25.24	0.95667	3.83667	89766.67	2.88000	0.89224	0.62116	0.37707	0.70109	0.39665
22.09	0.97667	4.50000	124766.67	3.52333	1.05555	0.73514	0.26244	0.56117	0.26187
18.93	0.94000	5.01000	154933.33	4.07000	1.16287	0.80949	0.18705	0.44057	0.14735
12.62	0.92000	5.82000	185166.67	4.90000	1.25618	0.87478	0.12498	0.31970	-0.02654
10.09	0.99333	7.22333	231100.00	6.23000	1.36656	0.95189	0.04783	0.13606	-0.30517

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 4-溴苯甲醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 41.81 D (μm)： 4.306 Initial pH： 7.53 EDTA(%)： 0
 T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO			IR	IR	IR
				mg/L	$\mu\text{specific}$	$\mu\text{relative}$	(growth rate)	(Biomass)	(DO)
Control	0.66	5.3	258800	4.64	1.424003	1	0	0	0
17.93	0.95	2.15	47000	1.2	0.571049	0.40102	0.59898	0.86874	0.74138
16.01	0.9	2.26	60200	1.36	0.694811	0.48793	0.51207	0.81460	0.70690
14.08	0.94	3.12	70500	2.18	0.773781	0.54338	0.45662	0.77235	0.53017
11.84	0.94	4.82	143200	3.88	1.128096	0.79220	0.20780	0.47416	0.16379
9.923	0.87	5.32	197900	4.45	1.289856	0.90580	0.09420	0.24979	0.04095
8.002	0.94	6.08	218000	5.14	1.338222	0.93976	0.06024	0.16735	-0.10776
Control	0.74	5.55	231200	4.81	1.367616	1	0	0	0
17.93	0.96	2.09	42800	1.13	0.524244	0.38333	0.61667	0.87142	0.76507
16.01	0.9	2.15	60300	1.25	0.695641	0.50865	0.49135	0.79047	0.74012
14.08	0.96	3.07	69000	2.11	0.763028	0.55793	0.44207	0.75023	0.56133
11.84	0.95	4.54	123800	3.59	1.055309	0.77164	0.22836	0.49676	0.25364
9.923	0.92	5.57	194000	4.65	1.279904	0.93586	0.06414	0.17206	0.03326
8.002	0.89	6.01	243300	5.12	1.393123	1.01865	-0.01865	-0.05597	-0.06445
Control	0.74	5.9	253100	5.16	1.412867	1	0	0	0
17.93	0.99	2.12	51200	1.13	0.613845	0.43447	0.56553	0.84796	0.78101
16.01	1	2.47	51300	1.47	0.614820	0.43516	0.56484	0.84754	0.71512
14.08	1.02	3.33	69800	2.31	0.768792	0.54414	0.45586	0.76984	0.55233
11.84	1.03	4.22	162500	3.19	1.191314	0.84319	0.15681	0.38051	0.38178
9.923	0.98	5.98	190000	5	1.269487	0.89852	0.10148	0.26501	0.03101
8.002	0.93	5.94	230700	5.01	1.366534	0.96721	0.03279	0.09408	0.02907
Control	0.7133	5.58333	247700.00	4.87000	1.401495	1	0	0	0
17.93	0.9667	2.12000	47000.00	1.15333	0.569712	0.40627	0.59271	0.86248	0.76318
16.01	0.9333	2.29333	57266.67	1.36000	0.668424	0.47725	0.52226	0.81836	0.72074
14.08	0.9733	3.17333	69766.67	2.20000	0.768534	0.54848	0.45185	0.76465	0.54825
11.84	0.9733	4.52667	143166.67	3.55333	1.124906	0.80234	0.19550	0.44922	0.27036
9.923	0.9233	5.62333	193966.67	4.70000	1.279749	0.91339	0.08720	0.23091	0.03491
8.002	0.9200	6.01000	230666.67	5.09000	1.365960	0.97521	0.02541	0.07320	-0.04517

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物：5-煙-2-硝基苯甲醛 初始細胞密度(cells/mL)： 15000

MCV (μm^3)： 43.91 D (μm)： 4.377 Initial pH： 7.52 EDTA(%)： 0

T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO		μ relative (growth rate)	IR (Biomass)	IR (DO)
				mg/L	μ specific			
Control	1.19	7.12	352200	5.93	1.578074	1	0	0
14.02	1.18	1.42	39900	0.24	0.489163	0.30997	0.69003	0.95953
9.01	1.14	2.76	90800	1.62	0.900305	0.57051	0.42949	0.77521
6.01	1.14	4.62	158800	3.48	1.179798	0.74762	0.25238	0.57355
4.01	1.16	6.68	309600	5.52	1.513615	0.95915	0.04085	0.12633
2.003	1.02	7.14	321200	6.12	1.532007	0.97081	0.02919	0.09193
1.001	0.92	6.99	352100	6.07	1.577933	0.99991	0.00009	0.00030
Control	1.01	6.8	356000	5.79	1.583440	1	0	0
14.02	1.14	1.49	34500	0.35	0.416455	0.26301	0.73699	0.94282
9.01	1.23	2.84	88800	1.61	0.889168	0.56154	0.43846	0.78358
6.01	1.12	5.2	173700	4.08	1.224640	0.77340	0.22660	0.53460
4.01	1.24	6.34	290300	5.1	1.481432	0.93558	0.06442	0.19267
2.003	1.04	6.83	377200	5.79	1.612363	1.01827	-0.01827	-0.06217
1.001	1.14	7.01	344000	5.87	1.566296	0.98917	0.01083	0.03519
Control	1.01	6.72	348400	5.71	1.572651	1	0	0
14.02	1.33	1.55	37200	0.22	0.454129	0.28877	0.71123	0.93341
9.01	1.17	2.8	86800	1.63	0.877778	0.55815	0.44185	0.78464
6.01	1.16	4.91	196000	3.75	1.285032	0.81711	0.18289	0.45711
4.01	1.18	6.09	271000	4.91	1.447034	0.92012	0.07988	0.23215
2.003	1.16	6.51	333300	5.35	1.550496	0.98591	0.01409	0.04529
1.001	0.99	7.23	354200	6.24	1.580906	1.00525	-0.00525	-0.01740
Control	1.0700	6.88000	352200.00	5.81000	1.578055	1	0	0
14.02	1.2167	1.48667	37200.00	0.27000	0.453249	0.28725	0.71223	0.93416
9.01	1.1800	2.80000	88800.00	1.62000	0.889084	0.56340	0.43655	0.78114
6.01	1.1400	4.91000	176166.67	3.77000	1.229823	0.77938	0.21950	0.52204
4.01	1.1933	6.37000	290300.00	5.17667	1.480694	0.93829	0.06124	0.18357
2.003	1.0733	6.82667	343900.00	5.75333	1.564955	0.99166	0.00756	0.02461
1.001	1.0167	7.07667	350100.00	6.06000	1.575045	0.99811	0.00189	0.00623

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

實驗毒物： 4-乙氧基苯甲醛 初始細胞密度(cells/mL)： 15000
 MCV (μm^3)： 41.02 D (μm)： 4.279 Initial pH： 7.46 EDTA(%)： 0
 T($^{\circ}\text{C}$)： 24 Test duration： 48-h

Conc mg/L	Initial DO mg/L	Final DO mg/L	Final cells cells/ml	Delta DO			IR (growth rate)	IR (Biomass)	IR (DO)
				mg/L	$\mu\text{specific}$	$\mu\text{relative}$			
Control	0.62	5.53	248800	4.91	1.40430	1	0	0	0
34.73	1.11	1.75	42100	0.64	0.51600	0.36744	0.63256	0.88409	0.86965
23.07	0.97	2.04	51700	1.07	0.61870	0.44058	0.55942	0.84303	0.78208
16.13	0.92	2.57	74100	1.65	0.79868	0.56874	0.43126	0.74722	0.66395
9.92	0.76	5.19	114900	4.43	1.01801	0.72492	0.27508	0.57271	0.09776
6.95	0.8	6.33	206400	5.53	1.31088	0.93348	0.06652	0.18135	-0.12627
4.96	0.74	6.75	217600	6.01	1.33730	0.95229	0.04771	0.13345	-0.22403
2.98	0.73	7.67	200300	6.94	1.29588	0.92280	0.07720	0.20744	-0.41344
Control	0.58	5.71	233700	5.13	1.37299	1	0	0	0
34.73	1.29	1.89	45500	0.6	0.55483	0.40410	0.59590	0.86054	0.88304
23.07	0.95	1.97	51800	1.02	0.61967	0.45133	0.54867	0.83173	0.80117
16.13	0.82	2.61	85500	1.79	0.87023	0.63382	0.36618	0.67764	0.65107
9.92	0.84	5.31	142100	4.47	1.12424	0.81882	0.18118	0.41884	0.12865
6.95	0.78	6.78	201800	6	1.29961	0.94655	0.05345	0.14586	-0.16959
4.96	0.8	7.16	208200	6.36	1.31522	0.95792	0.04208	0.11660	-0.23977
2.98	0.7	7.39	237500	6.69	1.38106	1.00587	-0.00587	-0.01738	-0.30409
Control	0.55	5.63	223600	5.08	1.35090	1	0	0	0
34.73	1.36	1.82	43800	0.46	0.53579	0.39662	0.60338	0.86194	0.90945
23.07	0.95	2.03	51500	1.08	0.61677	0.45656	0.54344	0.82502	0.78740
16.13	0.8	2.64	79800	1.84	0.83574	0.61865	0.38135	0.68936	0.63780
9.92	0.83	5.07	154000	4.24	1.16445	0.86198	0.13802	0.33365	0.16535
6.95	0.84	6.76	197100	5.92	1.28783	0.95331	0.04669	0.12704	-0.16535
4.96	0.7	7.63	227000	6.93	1.35845	1.00559	-0.00559	-0.01630	-0.36417
2.98	0.71	7.45	277600	6.74	1.45907	1.08007	-0.08007	-0.25887	-0.32677
Control	0.58333	5.62333	235366.67	5.04000	1.37607	1	0	0	0
34.73	1.25333	1.82000	43800.00	0.56667	0.53554	0.38939	0.61077	0.86931	0.88757
23.07	0.95667	2.01333	51666.67	1.05667	0.61838	0.44949	0.55077	0.83361	0.79034
16.13	0.84667	2.60667	79800.00	1.76000	0.83488	0.60707	0.39287	0.70594	0.65079
9.92	0.81000	5.19000	137000.00	4.38000	1.10223	0.80191	0.19657	0.44638	0.13095
6.95	0.80667	6.62333	201766.67	5.81667	1.29944	0.94445	0.05595	0.15247	-0.15410
4.96	0.74667	7.18000	217600.00	6.43333	1.33699	0.97193	0.02851	0.08062	-0.27646
2.98	0.71333	7.50333	238466.67	6.79000	1.37867	1.00291	-0.00475	-0.01407	-0.34722

IR : Inhibition rate

Biomass : Yield f (Final yield based on cell density)

