

TABLE 1. Measurements of *Euglena* during logarithmic growth as a function of light intensity. Numbers in parentheses are the sample numbers; one standard deviation is given. Carotenoids are in arbitrary units. The rate of photosynthesis has been corrected for respiration.

	Units	65	120	190	400	720	1200	3000
Light intensity	Ft-e							
Generation time	Hr	29.3 ± .5 (4)	20.0 ± 1.5 (7)	14.0 ± .8 (6)	10.9 ± .4 (6)		10.8 ± .6 (7)	11.5 ± .7 (10)
k	Hr <sup>-1</sup>	.0236 ± .0004 (4)	.0348 ± .0027 (7)	.0496 ± .0027 (6)	.0640 ± .0024 (6)		.0645 ± .0034 (7)	.0605 ± .0034 (10)
Dry mass	μg/cell	550 ± 7 (4)	588 ± 2 (4)	601 ± 10 (3)	635 ± 27 (7)		820 ± 38 (11)	790 ± 60 (6)
Protein	μg/cell	178 ± 13 (18)	234 ± 6 (16)	242 ± 6 (9)	246 ± 26 (20)		235 ± 17 (20)	236 ± 12 (10)
Chlorophyll a	μg/cell	32.6 ± 1.1 (3)	29.1 ± .5 (3)	26.1 ± .2 (3)	17.9 ± .2 (3)	13.4 (1)	8.73 ± .02 (3)	6.69 ± .15 (3)
Chlorophyll b	μg/cell	6.32 ± 0 (2)	4.69 ± .18 (3)	4.14 ± .07 (3)	3.76 ± .04 (3)		1.64 ± .25 (3)	1.22 ± .23 (3)
Carotenoids	μSPU/cell	7.03 ± .15 (3)	6.74 ± .19 (3)	6.61 ± .22 (3)	5.01 ± .04 (3)	5.53 (1)	3.86 ± .01 (3)	3.78 ± .11 (3)
RNA	μg/cell	17.7 ± 2.0 (3)	29.0 ± .19 (3)	39.5 ± 1.6 (4)	42.7 ± .4 (3)		41.8 ± 2.0 (3)	37.4 ± 4.0 (2)
DNA	μg/cell	3.35 ± .17 (3)	3.70 ± .28 (3)	4.14 ± .15 (4)	4.55 ± .29 (3)		3.82 ± .6 (3)	2.79 ± .78 (2)
Volume	μ <sup>3</sup> /cell	4500 (1)	4200 (1)	3800 (1)	4050 (1)		3650 (1)	3750 (1)
Paramylum	μg/cell	37.5 ± 4.5 (10)	27 ± 6 (8)	64 ± 6 (9)	194 ± 29 (8)		378 ± 27 (9)	377 ± 28 (5)
“Lipids”	μg/cell	188 ± 12 (2)	176 ± 6 (2)	158 ± 1 (2)	159 ± 14 (2)		138 ± 7 (2)	112 ± 6 (2)
Respiration	μl O <sub>2</sub> /cell/hr		3.79		15.2	16.6	15.2	11.9
Photosynthesis	μl O <sub>2</sub> /cell/hr		17.8		43.9	64.1	75.8	74.0