Algae O_2 problem

Oxygen in air O_2 at 0°C 0.14
" O_2 " 0.18

Solubility in H_2O at 25°C

Nitrogen
0.00143 cc/cc

O_2
0.028 cc/cc

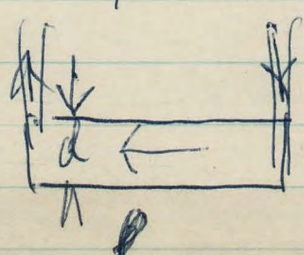
CO_2
0.76 cc/cc

Solar constant
at normal incidence
1.92 small cal/min/cm²
$\sim \frac{2}{60}$ cal/cm²-sec
$\sim \frac{2}{60}$ watt/cm² ~~sec~~
$= \frac{8 \times 10^4}{60}$ watt/m²
$= 1.33$ KW/m²

Carbon dioxide in air $\frac{3}{100}$ %

If we want to grow 1 gm of ~~dry substance~~ carbon/liter per day and have our 20 cm thick we have to admit 1 gm ~~of~~ of carbon per 100 cm² per 24 hours or $\frac{1}{2400}$ gm per cm² per hour

or $\frac{1}{3600} \frac{1}{24} \frac{1}{10}$ gm per cm² per sec.



in 7 d² sec we get in 1 cm² 1/2 of CO_2 contained in 1 cc air ~~of~~ cc of CO_2 contained in 1 cc of air.

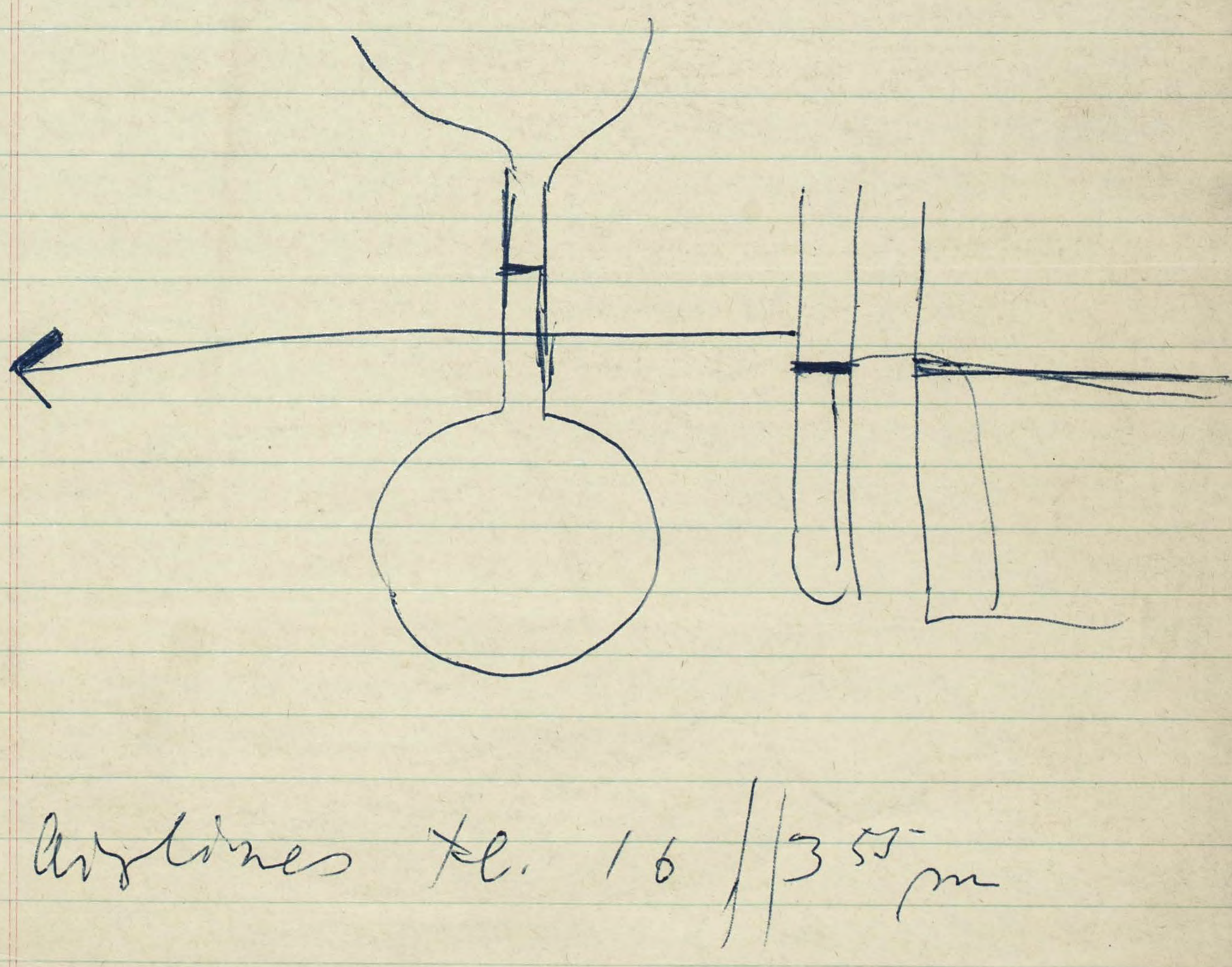
$[\tau] = \text{sec/cm}^2$ $\quad \tau = \frac{l}{7d^2}$ $\quad 1 \frac{\text{cc of } CO_2}{\text{sec cm}^2} = \frac{1}{2} \alpha \frac{v}{l} \frac{d}{l}$

serine -resistant (dl?)
mutants

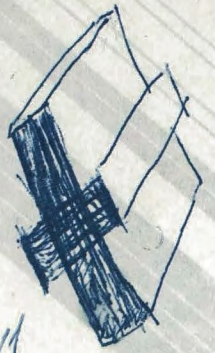
Look in chemostat at U.V irradiated
population.

Age population by U.V.
irradiation

1101 Bellaire
Apt 304



Am Airlines Fl. 16 || 3^55 pm



Barrow

Clemente Estable

Uruguay