

Photosynthesis Lab Part 1:

http://www.phschool.com/science/biology_place/labbench/lab4/intro.h

Rf = $\frac{\text{distance the pigment travels}}{\text{distance the solvent travels}}$

Group	Chlor. b	Chlor. a	xanthophyll	carotene
Carrot	X	X	X	1
Carrot	X	X	X	1
Spinach	.0202	.0505	.12121	.9596
Spinach	.020	none.	.043	.945
Spinach	.125	.1125	.175	.925
Spinach	.0093	.037	.175	.925
Spinach			0.056	0.953
Spinach	.048	.060	.10	.87
Spinach	.033	.074	.115	.959

Expected Results:

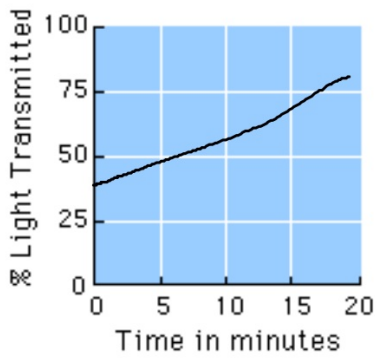
R_f carotene = 0.95-0.99 (usually faint yellow line)

R_f xanthophyll = 0.4 (yellow)

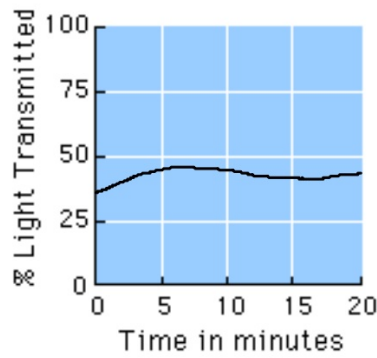
R_f chlorophyll a = 0.2 (bright green to blue green)

R_f chlorophyll b = 0.1 (yellow green to olive green)

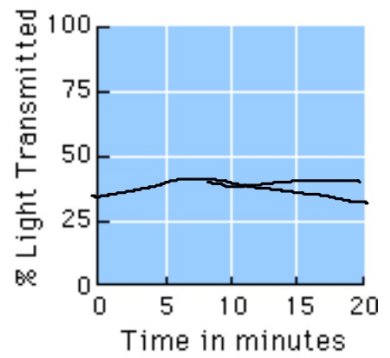
Photosynthesis Lab Part 2:



Tube 2
DPIP, unboiled chloroplasts
(Light)



Tube 3
DPIP, unboiled chloroplasts
(Dark)



Tube 4
DPIP, boiled chloroplasts
(Boiled)

76
35%
transm.

No chloroplasts

Expected Results

Test Tube	Time (minutes)			
	0	5	10	15
unboiled/dark	31.3	32.5	35.5	34.8
unboiled/light	32.7	54.5	63.7	65.1
boiled/light	32.7	32.9	33.1	32.5
no chloroplasts	31.3	31.3	31.3	31.3