

Roaring Spring

Compositions

Name Alyshia M. Myer
School SMART-INITIATIVE
Grade 12

9 1/2 in. x 7 1/2 in. 60 Leaves

Roaring Spring, PA 16873



CLASS PROGRAM

NAME Alysha J. King ADDRESS _____

SCHOOL SMART CLASS _____

		PERIOD 1	PERIOD 2	PERIOD 3	PERIOD 4	PERIOD 5	PERIOD 6	PERIOD 7	PERIOD 8
TIME	FROM								
	TO...								
MONDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
TUESDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
WEDNESDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
THURSDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
FRIDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								
SATURDAY	SUBJECT								
	ROOM								
	INSTRUCTOR								

120
1
2
3
4
5
6
7

1
2
3
4
5
6
7

9 1/4 in. x 7 1/2 in.

1st experiment

7/14/00

tube #	total abse	dose rate	time	Attenuation
1	0	0	0	0
2	0	0	0	0
3	500	717.38	.69	X-0
4	1,000	717.38	1.39	X-0
5	5,000	2890	1.73	X-0
6	10,000	2890	3.46	X-0
7	30,000	2890	10.38	X-0

	DOSE	Dilution	#1	#2	#3	Ave	SE
1	0	1.4	97	93	115	100.25	1
2	0	2.4	102	123	111		1
3	500	3.4	64	77	64	68.3	.425
4	1,000	4.4	47	50	60	52.3	.825
5	5,000	5.4	36	39	26	33.6	.200
6	10,000	6.3	296	292	235	27.4	.168
7	30,000	7.3	230	283	296	26.9	.160

6 July 2000

Background = 4

500 μ l

1st allcount

2nd

1926

2084

1962

1960

1923

1959

1999

Average 1937

774800 c/ml

10 July 2000

Split cells

- 1) check flask for confluency 70-80%
- 2) remove medium from flask and put into waste bottle.
- 3) wash flask with 5ml PBS & remove
- 4) Add 2ml trypsin, incubate for 3m.
- 5) remove and tap flask.
- 6) Add medium & remove cells.
- 7) put into 50ml tube & syringe (10cc) 7x's
- 8) perform cell count.

cell count:

BKGD = 3

500µl

cell count 6757

6687

6956

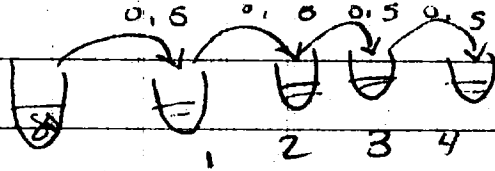
Average 6800 $\times 400 = 2,720,000$ /ml

11 July 2000

- 2 controls
- 8 irradiated
- centrifuged
- take out 200 μ l of supernatant
- click (run tube along rack)
- wash

17 July 2000

Serial dilutions



0.5 ml \rightarrow 5 ml

+
4.5 ml

0.5×10^{-5}

plated cells

500 μ l cell count

tube #

BKGD: 29

1 1.4

1848, 1761, 1523

2 2.4

2097, 1880, 1679

3 3.4

1215, 1299, 1327

4 4.4

4170, 3475, 3096

5 5.4, 5.3

3496, 2414, 2434

6 6.3, 6.2

4287, 3575, 2703

7 7.3, 7.2

3211, 3386, 3366

18 July 2000

Hydrolysis 2 cal byphen
+ 8 ml MEMA

3ml → 100 ml

add 10 to 20 ml MEMA

19 July 2000

of
plated
cells

41,000,000

↓ 0.5

200,000

↓ 0.5 ml

20,000

↓ 0.5 ml

2,000

↓ 0.5 ml

200

20 July 2000

Wipe test

F-451

F-462

Sample #	Location	results	Sample #	Location	results
1	control	0	1	control	0
2	control	0	2	control	0
3	incubator #1	0	3	hood	0
4	fridge #1	0	4	incubator	0
5	hood	0	5	fridge	0
6	Centrifuge	0	6	door	0
7	incubator #2	0			
8	culture counter	0			
9	fridge #2	0			
10	-70°C fridge	0			
11	Lyophilizer	0			
12	HPLC injection area	0			
13	HPLC column	0			
14	HPLC Bench	0			
15	HPLC collection area	0			
16	flask by -70°C fridge	0			
17	telephone	0			
18	main door knob	0			

25 July 2000

exp. #1 results

colony count (x-rays)
#1 #2 #3 Average

1.4	97	93	115	100.25
2.4	102	123	111	
3.4	64	77	64	68.3
4.4	47	50	60	52.3
5.4	36	39	26	33.6
6.3	296	292	235	274
7.3	230	283	296	269

dose

0
5
10
50
100
300

Annual Fixed

1
.425
.325
.2063
.1688
.1625

irradiator was broken

time #	exp # 2 dose	irradiation rate	time	A#
1	0	0	0	0
2	0	0	0	0
3	200	717.38	0.28	X-0
4	1,200	717.38	1.67	X-0
5	6,000	2890.0	2.08	X-0
6	12,000	2890.0	4.15	X-0
7	20,000	2890.0	6.92	X-0

cell count

exp #2 δ -ray BKG 0.4 50M

1630

1539

1547

$$\frac{4716}{3} = 1572 \times 4,000 = 6,288,000 \text{ c/ml}$$

need 2 ml of 2,000,000 c/ml

$$\begin{array}{l} 44 \text{ mill cells} \\ 6,288,000 \text{ c/ml} \end{array} = \frac{6.9}{7} \text{ ml of cells} = \frac{2.5}{7} \text{ ml of MEMA}$$

2nd cell count

529

579

560

$$\frac{1664}{3} = 554.6 \times 4,000 = 2,218,666.6 \text{ c/ml}$$

27 July 2000

10 tubes

cell count BKGD: 9 50 μ l

2153

2347

2404

6904

$$\frac{6904}{3} = 2301 \times 4,000 = 9,205,333 \text{ c/ml}$$

need 4 ml c/ml

48,000,000

9,205,333

$$= 5 \text{ ml/c}$$

12
- 5.5

6.5 ml of MEMB

2nd cell count

1133

1105

1117

3355

$$\frac{3355}{3} = 1118 \times 4,000 = 4,473,333 \text{ c/ml}$$

28 July 2000

dilution count

γ -rays exp # 2 7 tubes

50 μ l BCGD : 7

tube #	counts	dilution plated
1	529, 558, 582	1.4
2	537, 500, 541	2.4
3	602, 612, 617	3.4
4	533, 568, 512	4.4
5	545, 530, 544	5.4
6	615, 595, 585	6.4, 6.5
7	505, 526, 510	7.4, 7.3

1 August

exp # 3

tube #	dose	Rate	time	Attenuation
1	0	0	0	0
2	0	0	0	0
3	300	717.38	.42	x-0
4	1,500	717.38	2.09	x-0
5	2,500	717.38	3.48	x-0
6	5,000	2890.0	1.73	x-0
7	15,000	2890.0	5.19	x-0

cont for dilutions.

2145
1924
1936

50ml

$$\frac{6000}{3} = 2002 \times 4,000 = 8,008,000$$

need 10ml of 2ml/ml

$$\frac{32 \text{ ml} - 4 \text{ ml/c}}{8,008,000} = \frac{16}{12 \text{ ml MEMB}}$$

496
522
573

$$\frac{1593}{3} = 531 \times 4,000 = 2,124,000 \text{ ml/ml}$$

in Rock, Rover 1.00-3.00

3 Aug, 1961 2000

50 μ l BKGD = 3

14 tubes

1476
1533
1539
1443
1372
1388

1539
1533
1476

8 ml of 400,000 cells/ml

$\frac{4548}{3} = 1516 \times 4,000 = 6,064,000 \text{ c/ml}$

$\frac{3,200,000}{6,064,000} = .53 \text{ ml/cells}$

$\frac{8}{.53} = 7.47 \text{ ml of mem B}$

end cell count

130
147
142
176

107
99
107
313

$\frac{313}{3} = 104.3 \times 4,000 = 417,333 \text{ c/ml}$

154
141
25
36
20
15
23
22
25

1549
 1416
 2577
 3634
 2060
 1813
 2390
 2279
 2555

4 august

Add 3,600,000 cells → 400,000 cells

50µl BKGP=8

16 ml w/3,600,000 cells

$$\frac{2577 + 2560 + 2555}{3} = 2564 \times 4,000 = 10,256,000 \text{ cells/ml}$$

$$\frac{57,600,000}{10,256,000} = 5.6 \text{ ml of cells} \quad \frac{16}{-6} = 10 \text{ ml of MEMA}$$

Exp. #3 of-ray dilution count

tube	
#1	400,389,420
#2	439,441,375
#3	346,349,330
#4	368,325,336
#5	372,330,349
#6	352,355,403
#7	359,351,339

4 August 2000

exp # 2 x-ray colony count

1.4	177,146,190
2.4	169,186,168
3.4	119,115,114
4.4	111,94,93
5.4	76,73,63
6.4	178,183,187
7.4	63,49,67

dose	Avg	S.F.
------	-----	------

0	→ 259	→ 1
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300	→ 116	→ .44
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1500	→ 99.33	→ .38
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2500	→ 70.66	→ .27
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5000	→ 182.66	→ .70
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15000	→ 59.66	→ .23
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28 July 2000

10 dilutions cont
~~10 by 10 ml~~
500ul

- #1 100,77,70
- 2 59,41,73
- 3 50,26,56
- 4 81,91,92
- 5 37,27,48
- 6 47,54,52
- 7 82,77,77
- 8 76,81,68
- 9 53,51,57
- 10 58,51,71

31 July 2000

14 ^{tubes} dilution count

1	107,91,82	13	251,258,297
2	79,75,71	14	305,362,321
3	36,36,55		
4	37,48,39		
5	64,49,64		
6	97,113,84		
7	71,77,75		
8	47,47,54		
9	81,72,65		
10	55,42,50		
11	272,300,268		
12	305,362,321 231,320,214		

10 tubes

cell count 50µl BKGD=7

1	484,499,473	6	377,373,380
2	637,618,619	7	441,414,455
3	650,641,626	8	571,505,514
4	640,632,638	9	475,439,432
5	668,690,636	10	405,416,441

31 July 2000

cells plated

1.4	4.4	7.3	7.4	
2.4	5.4	8.3	8.4	10.2, 10.3
3.4	6.4	9.2	9.3	

50ul BRGP = 3

need 14 tubes @ 6 ml w/ 4 ml/c/ml

$$\begin{array}{r} 1990 \\ 1990 \\ \hline 2029 \\ \hline 6009 \\ \hline 3 \end{array}$$

= 2003 x 4,000 = 8,012,000

$$\begin{array}{r} 1824 \\ 1980 \\ \hline 1956 \end{array}$$

$\frac{5760}{3} = 1920 \times 4,000 = 7,680,000$

$$\frac{64,000,000}{7,680,000} = 8 \text{ ml/c} = \frac{16}{8} \text{ ml MEMB}$$

$$\begin{array}{r} 869 \\ + 890 \\ \hline 860 \end{array}$$

$$\frac{2619}{3} = 873 \times 4,000 = 3,492,000$$

7 August 2000

8 ml (.5 ml) in each tube

50 ml BKGD = 70

need 400,000 cells.

958

889

986

2833

$$\frac{2833}{3} = 944 \times 4,000 = 3,777,200 \text{ cells/ml}$$

$$\frac{3,200,000}{3,777,200} = 0.85 \text{ ml of cells}$$

or .9

$$\begin{array}{r} 8 \\ - .9 \\ \hline 7.1 \text{ ml of MEMB} \end{array}$$

118

113

92

323

$$\frac{323}{3} = 107.6 \times 4,000 = 430,666$$

cells plated

1.4

7.4, 7.3

14.4, 14.3

2.4

8.4

9.4

3.4

10.4

4.4

11.4

12.4

5.4

13.4, 13.3

6.4, 6.3

2000

8 August 2000

cell count

BKGD = 2 50µl

need 16me w/ 3,600,000 cells.

991
1101
951

773
793
697

2265
3

= 755 x 4,000 =

3,020,000 µl

01

3

2000
10 August 2007

from a roll of

1 liter 1 ml 2 ml / ml

cell count

0.1 ml 3.14 x 10⁸

976 ✓

930 ✓

933 ✓

933

938

976

$$\frac{2839}{3} = 946.3 \times 4,000 = 3,785,333 \text{ / ml}$$

609

679

614

543

499

394

530

$$\frac{32,000,000}{3,785,333} = 8.5 \text{ ml/c}$$

499

543

530

1572

3

= 524

x 4,000

= 2,096,000

/ ml

16
- 8.5

7.5 ml

MEMB

11 August 2000

411
482 ✓
447 ✓
436 ✓
208
345
353

14 tubes - processing
squl cellcount B1GP = 1

need 11ml w/ 2ml C/ml

~~2028~~
~~2012~~
~~2015~~
~~2013~~
~~2014~~

436
447
482

$$\frac{1305}{3} = 435 \times 4,000 = 1,740,000 \text{ cells/ml} = 1,820,000$$

~~1,820,000~~ = 1.1 ml of cells

$$(2) \frac{1 \text{ ml}}{1,820,000} = \frac{x \text{ ml}}{2 \text{ ml}} (2)$$

5.149

$$\frac{2}{1,820,000} = x \quad x = 1.098$$

of 1.1 ml of cells

11 August 2000

cell dilution counts

	tube #	50ul BKGD=1
RANDOM TOP OF CELLS when made cluster.	1	89, 97, 86
	2	331, 316, 329
	3	378, 330, 375
	4	333, 404, 367
	5	396, 382, 408,
	6	342, 331, 344,
	7	340, 349, 344
	8	325, 347, 304
	9	315, 291, 283,
	10	307, 339, 323
	11	285, 314, 323
	12	260, 262, 284
	13	361, 315, 298
	14	355, 324, 356

played

1.4	6.8	11.4	14.3
2.4	7.2	12.3	
3.4	8.4	13.2	
4.4	9.4	13.3	
5.4	10.4	14.2	