

Room TRIAL 1: Faith, Ariel, Josh, Finn
 Amount of Oxygen (mL +/- 0.01) Consumed by Germinating and Dormant Seeds at
19 °C Over _____ Minutes (+/- _____) With Calculated Average O₂ Consumed (Corrected for
 Air Pressure Δ) per Minute (+/- _____)

Respirometer Contents	Time (minutes +/- _____)	Volume of water in the respirometer (mL +/- _____)	O ₂ Consumed per 2 minute interval (mL +/- _____)	O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- _____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- _____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per minute (mL +/- _____/min +/- _____)
Germinating Seeds	0	0.00			0.011	0.0055
	2	0.08	0.08	0.02		
	4	0.16	0.08	0.02		
	6	0.17	0.01	-0.01		
	8	0.20	0.03	0.01		
	10	0.21	0.01	0.00		
	12	0.23	0.02	0.01		
	14	0.26	0.03	0.02		
	16	0.28	0.02	0.01		
	18	0.30	0.02	0.01		
	20	0.33	0.03	0.02		
Dormant ⊕ Beads	0	0.00			0.000	0.0000
	2	0.07	0.07	0.01		
	4	0.14	0.07	0.01		
	6	0.15	0.01	-0.01		
	8	0.16	0.01	-0.01		
	10	0.17	0.01	0.00		
	12	0.18	0.01	0.00		
	14	0.19	0.01	0.00		
	16	0.20	0.01	0.00		
	18	0.21	0.01	0.00		
	20	0.22	0.01	0.00		
Glass Beads	0	0.00				
	2	0.06	0.06			
	4	0.12	0.06			
	6	0.14	0.02			
	8	0.16	0.02			
	10	0.17	0.01			
	12	0.18	0.01			
	14	0.19	0.01			
	16	0.20	0.01			
	18	0.21	0.01			
	20	0.22	0.01			

O₂ Volume Consumed per Interval = Final Volume - Previous Volume
 Corrected Difference = O₂ Volume Consumed by the seeds - O₂ Volume changes in the glass bead respirometer
 Average = Add all data points, then divide by the total # of data points

Cold

TRIAL 1: Amount of Oxygen (___ +/- ___) Consumed by Germinating and Dormant Seeds at ___ °C Over ___ Minutes (+/- ___) With Calculated Average O₂ Consumed (Corrected for Air Pressure Δ) per Minute (+/- ___)

Respirometer Contents	Time (minutes +/- ___)	Volume of water in the respirometer (mL +/- ___)	O ₂ Consumed per 2 minute interval (mL +/- ___)	O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- ___)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- ___)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per minute (mL +/- ___/min +/- ___)
<i>Germinating Seeds</i>	0	4.1	0.41			
	2	4.2	0.42	0.01	-0.02	0.18
	4	4.5	0.45	0.03	-0.03	
	6	8.2	0.82	0.37	0.15	
	8	8.5	0.85	0.03	0.03	
	10	9	0.90	0.05	-0.01	
	12	9.2	0.92	0.02	0.00	
	14	9.3	0.93	0.01	0.01	
	16	9.4	0.94	0.01	0.01	
	18	9.4	0.94	0.00	0.02	
	20	9.4	0.94	0.00	0.02	
<i>Dormant Seeds ⊕ Beads</i>	0	4.1				
	2	4.6				
	4	4.9				
	6	7.6				
	8	8.3				
	10	8.5				
	12	8.8				
	14	8.8				
	16	8.8				
	18	8.5				
	20	8.5				
<i>Glass Beads shawshaw env. Δing set-up</i>	0	4.1	0.41			
	2	4.4	0.44	0.03		
	4	5.0	0.50	0.06		
	6	7.2	0.72	0.22		
	8	7.2	0.72	0.00		
	10	7.8	0.78	0.06		
	12	8	0.80	0.02		
	14	8	0.80	0.00		
	16	8	0.80	0.00		
	18	7.8	0.78	-0.02		
	20	7.6	0.76	-0.02		

O₂ Volume Consumed per Interval = Final Volume - Previous Volume
 Corrected Difference = O₂ Volume Consumed by the seeds - O₂ Volume changes in the glass bead respirometer
 Average = Add all data points, then divide by the total # of data points

*Andrew
Sarah
mark
rogan*

Quantitative Raw & Processed Data:

Hot

*Next Butler
Nylan
Miles
Gerrett
Geist
Sanders*

TRIAL 1: Amount of Oxygen (___ +/- ___) Consumed by Germinating and Dormant Seeds at 35 °C Over _____ Minutes (+/- ___) With Calculated Average O₂ Consumed (Corrected for Air Pressure Δ) per Minute (+/- ___)

Respirometer Contents	Time (minutes +/- _____)	Volume of water in the respirometer (mL +/- _____)	O ₂ Consumed per 2 minute interval (mL +/- _____)	O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- _____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- _____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per minute (mL +/- _____/min +/- _____)
<i>Germinating seeds</i>	0	0				
	2	0				
	4	0				
	6	0				
	8	1.8 0.18				
	10	2.0 0.20				
	12	2.0	0.20			
	14	2.8	0.28			
	16	2.8	0.28			
	18	4.5	0.45			
	20	4.2	0.42			
<i>Dormant seeds ⊕ Beads</i>	0	0				
	2	0				
	4	0				
	6	0				
	8	0				
	10	0				
	12	0.8				
	14	0.9				
	16	1.5				
	18	2.0				
	20	1.6				
<i>Glass Beads</i>	0	0				
	2	0				
	4	0				
	6	0				
	8	0				
	10	0				
	12	2				
	14	2.5				
	16	3.0				
	18	3.7				
	20	3.0				

O₂ Volume Consumed per Interval = Final Volume - Previous Volume
 Corrected Difference = O₂ Volume Consumed by the seeds - O₂ Volume changes in the glass bead respirometer
 Average = Add all data points, then divide by the total # of data points

Room TRIAL 2: Amount of Oxygen (___ +/- ___) Consumed by Germinating and Dormant Seeds at 19 °C Over ___ Minutes (+/- ___) With Calculated Average O₂ Consumed (Corrected for Air Pressure Δ) per Minute (+/- ___)

Respirometer Contents	Time (minutes +/- ___)	Volume of water in the respirometer (mL +/- ___)	O ₂ Consumed per 2 minute interval (mL +/- ___)	O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- ___)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- ___)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per minute (mL +/- ___/min +/- ___)
Germinating Seeds	0	1.0 0.10				
	2	1.0 0.16				
	4	1.9 0.19				
	6	2.0 0.20				
	8	2.2 0.22				
	10	2.5 0.25				
	12	2.7 0.27				
	14	2.8 0.28				
	16	3.0 0.30				
	18	3.2 0.32				
	20	3.4 0.34				
Dormant Seeds ⊕ Beads	0	1.0				
	2	1.2				
	4	1.3				
	6	1.3				
	8	1.4				
	10	1.5				
	12	1.0				
	14	1.0				
	16	1.0				
	18	1.0				
	20	1.7				
Glass Beads	0	1.0				
	2	1.1				
	4	1.2				
	6	1.2				
	8	1.3				
	10	1.3				
	12	1.4				
	14	1.5				
	16	1.0				
	18	1.0				
	20	1.0				

O₂ Volume Consumed per Interval = Final Volume - Previous Volume
 Corrected Difference = O₂ Volume Consumed by the seeds - O₂ Volume changes in the glass bead respirometer
 Average = Add all data points, then divide by the total # of data points

AUSTIN, MO, ZOU, CARSON, GRACIE

Cold TRIAL 2: Amount of Oxygen (___ +/- ___) Consumed by Germinating and Dormant Seeds at 6 °C Over _____ Minutes (+/- ___) With Calculated Average O₂ Consumed (Corrected for Air Pressure Δ) per Minute (+/- ___)

Respirometer Contents	Time (minutes +/- _____)	Volume of water in the respirometer (mL +/- _____)	O ₂ Consumed per 2 minute interval (mL +/- _____)	O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- _____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- _____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per minute (mL +/- _____/min +/- _____)
Germinating Seeds	0	1.8 0.18				
	2	4.4 0.40				
	4	4.7 0.47				
	6	4.6 0.46				
	8	4.9 0.49				
	10	5 0.50				
	12	5 0.50				
	14	5 0.50				
	16	5 0.50				
	18	5 0.50				
	20	5 0.50				
Dormant Seeds ⊕ Beads	0	3.1 0.31				
	2	3.5				
	4	3.2				
	6	3.8				
	8	4.9				
	10	4.9				
	12	3.8				
	14	3.6				
	16	3.5				
	18	3.5				
	20	3.4				
Glass Beads	0	3				
	2	3.5				
	4	3.6				
	6	4.3				
	8	4.2				
	10	4.1				
	12	4				
	14	3.8				
	16	3.7				
	18	3.6				
	20	3.5				

O₂ Volume Consumed per Interval = Final Volume - Previous Volume
 Corrected Difference = O₂ Volume Consumed by the seeds - O₂ Volume changes in the glass bead respirometer
 Average = Add all data points, then divide by the total # of data points

Hot

Lorien, Meg, Brianna, Audrey

TRIAL 2: Amount of Oxygen (____ +/- ____) Consumed by Germinating and Dormant Seeds at 30 °C Over _____ Minutes (+/- ____) With Calculated Average O₂ Consumed (Corrected for Air Pressure Δ) per Minute (+/- ____)

Respirometer Contents	Time (minutes +/- ____)	Volume of water in the respirometer (mL +/- ____)	O ₂ Consumed per 2 minute interval (mL +/- ____)	O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- ____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per 2 minute interval (mL +/- ____)	Average O ₂ Consumed (Corrected for Air Pressure Δ) per minute (mL +/- ____ /min +/- ____)
Germinating Seeds	0	0				
	2	0				
	4	0				
	6	.13				
	8	.2				
	10	.3				
	12	.41				
	14	.46				
	16	.53				
	18	.61				
	20	.68				
Dormant Seeds ⊕ Beads	0	0				
	2	0				
	4	0				
	6	0				
	8	0				
	10	.09				
	12	.12				
	14	.15				
	16	.2				
	18	.23				
	20	.27				
Glass Beads	0	0				
	2	.2				
	4	.2				
	6	.2				
	8	.2				
	10	.29				
	12	.35				
	14	.38				
	16	.43				
	18	.47				
	20	.51				

O₂ Volume Consumed per Interval = Final Volume - Previous Volume
 Corrected Difference = O₂ Volume Consumed by the seeds - O₂ Volume changes in the glass bead respirometer
 Average = Add all data points, then divide by the total # of data points