

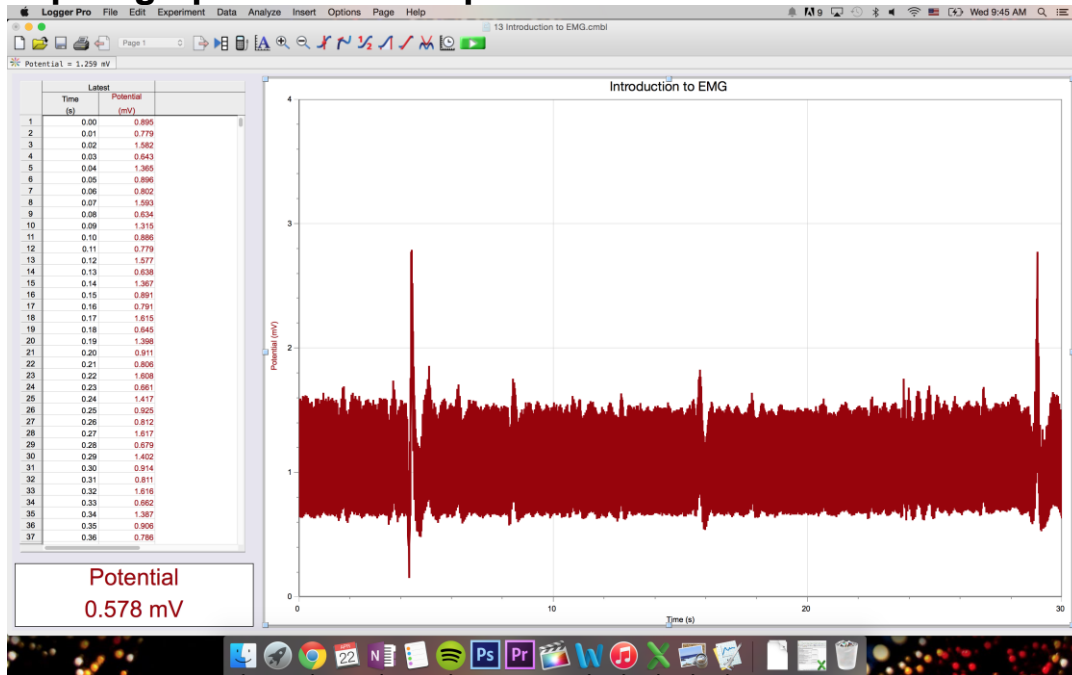
**Introduction to EMG  
Group Names**

**Name: Maria, Lucia, & Julia**

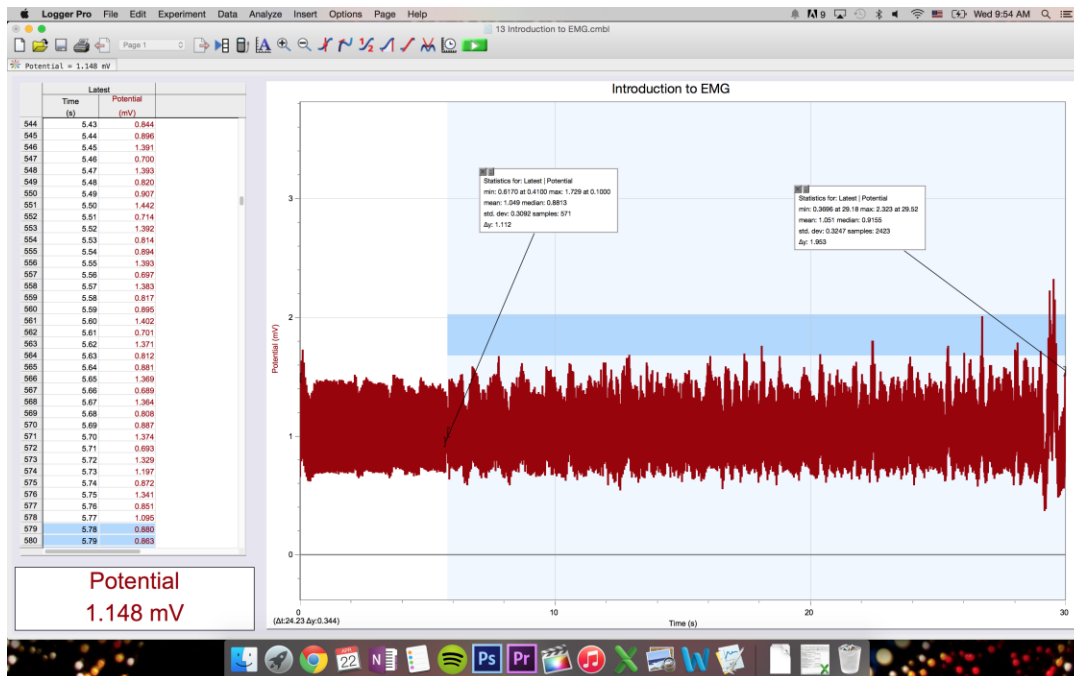
**Table 1**

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Condition	Interval	Minimum mV	Maximum mV	$\Delta$ mV
Jaw Clenching	0-5 s	.58	1.74	1.16
	5-10 s	.48	2.79	1.635
Chewing soft object ( replace)	0-5 s	.57	1.74	1.15
	Chewing interval	.45	1.92	1.185
Chewing hard object ( replace)	0-5 s	.62	1.72	1.17
	Chewing interval	.37	2.32	1.345
Chewing medium object ( replace)	0-5 s	.68	1.51	1.095
	Chewing interval	.54	1.93	1.235

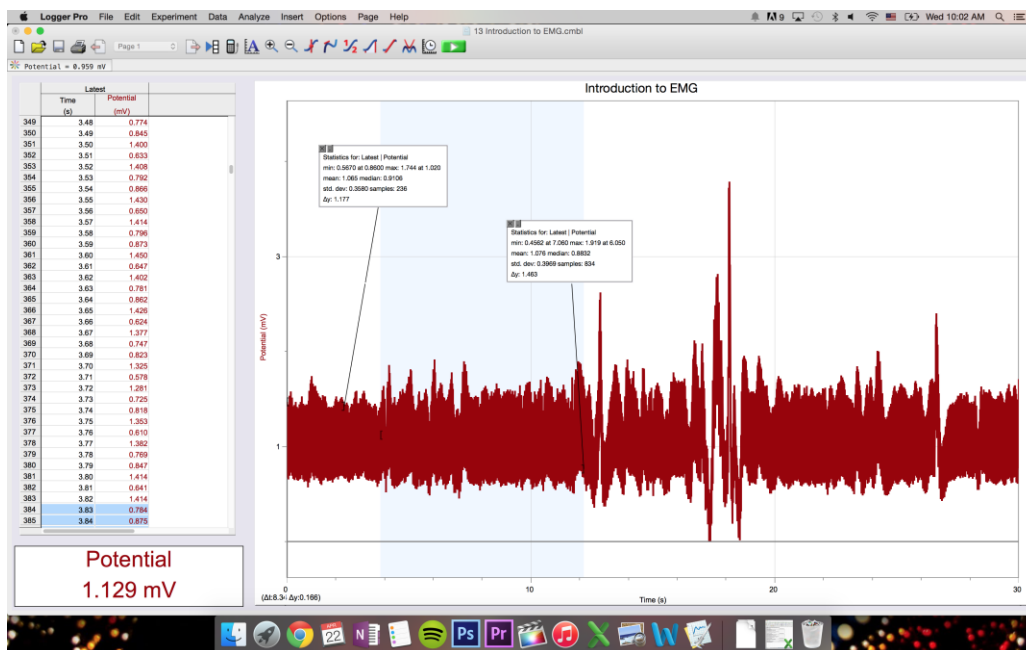
**Import graphs with descriptions**



**This is lucia chewing the hard object- granola bar**



**This is Lucia chewing the medium item- oyster crackers**



**this is Lucia chewing the soft item- gum**

## DATA ANALYSIS

1. Rank, in order (from greatest to least), the amplitude of EMG electrical activity for each of the items tested: carrot, egg, chewing gum.

Hard, medium, soft: granola, crackers, gum

2. Compare the frequency of muscle activation during mastication (chewing) of the three food items tested. Is there a significant difference in the number of similar spikes generated during a 5 s interval of data collection for each of the items tested?

No all of the EMG's looked very similar except for the outliers in the gum.

3. Compare rates of chewing within your lab group/class. Are there significant differences?

Ours was mostly larger than other groups. There was one significant difference when one group chewed a butterscotch candy.

4. On the basis of the findings in this experiment what recommendation would you make to a friend with a temporomandibular disorder (TMD) regarding his/her food choices?

Don't chew hard items and try to stick to soft foods.

5. The "Iron Jaw Trick" is a popular circus act in which a performer (or two performers) hang from a trapeze by his/her teeth. What exercises might someone do to strengthen the masseter muscles of the jaw so that a trick of this type could be performed successfully?

Chew hard things to strengthen the jaw by using the muscle often similar to other forms of muscle building.

6. Chronic headaches and temporomandibular disorders (TMD) may be the result of unconscious clenching of the jaw. What are some ways to reduce/prevent jaw clenching?

When you sleep, wear a mouth guard.