



BIOPAC
Systems, Inc.

Physiology Lessons
for use with the
Biopac Student Lab

PC under Windows® 98SE, Me, 2000 Pro
or Macintosh® 8.6 – 9.1

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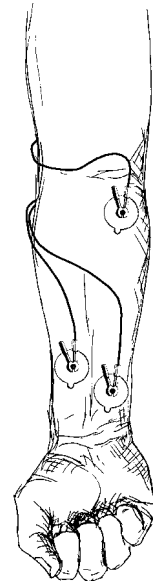
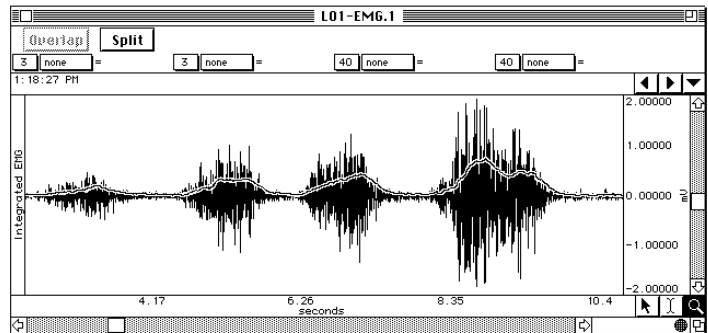
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Lesson 1 Data Report
ELECTROMYOGRAPHY I
Standard and Integrated EMG



ELECTROMYOGRAPHY I

Standard and Integrated EMG

DATA REPORT

Student's Name: _____

Lab Section: _____

Date: _____

I. Data and Calculations

Subject Profile

Name _____

Height _____

Age _____

Weight _____

Gender: Male / Female

A. EMG Measurements

Cluster #	<i>Forearm 1 (Dominant)</i>				<i>Forearm 2</i>			
	Min [3 min]	Max [3 max]	P-P [3 p-p]	Mean [40 mean]	Min [3 min]	Max [3 max]	P-P [3 p-p]	Mean [40 mean]
1								
2								
3								
4								

Note: "Clusters" are the EMG bursts associated with each clench.

- B. Use the mean measurement from the table above to compute the percentage increase in EMG activity recorded between the weakest clench and the strongest clench of Forearm 1.

Calculation:

Answer: _____ %

C. Tonus Measurements

Cluster #	<i>Forearm 1 (Dominant)</i>		<i>Forearm 2</i>	
	P-P [3 p-p]	Mean [40 mean]	P-P [3 p-p]	Mean [40 mean]
1				
2				
3				
4				

II. QUESTIONS

D. Compare the mean measurement for the right and left maximum clench EMG cluster. Are they the same or different?

_____ Same _____ Different

Which one suggests the greater clench strength?

_____ Right _____ Left _____ Neither

Explain.

E. What factors in addition to sex contribute to observed differences in clench strength?

F. Does there appear to be any difference in tonus between the two forearm clench muscles?

_____ Yes _____ No

Would you expect to see a difference? Does subject's sex influence your expectations? Explain.

G. Explain the source of signals detected by the EMG electrodes.

H. What does the term “motor unit recruitment” mean?

I. Define skeletal muscle tonus.

J. Define electromyography.

End of Lesson 1 Data Report