

LABORATORY REPORT SHEET

Name _____ Date _____ Lab Section _____

Calibration of the monochromator

	Hg			He		
λ (nm)	_____	_____	_____	_____	_____	_____
x (cm)						
Trial 1	_____	_____	_____	_____	_____	_____
Trial 2	_____	_____	_____	_____	_____	_____
Trial 3	_____	_____	_____	_____	_____	_____
Trial 4	_____	_____	_____	_____	_____	_____
Mean x (cm)	_____	_____	_____	_____	_____	_____

Construct a calibration curve for your monochromator. Determine the equation for best straight-line fit to your data: (Be sure to include a calibration curve in your final report).

Equation of best-fit line: _____

Use this equation to determine the λ for the emission lines in the Balmer series.

LABORATORY REPORT SHEET (2)

Name _____ Date _____ Lab Section _____

The Balmer series

Color	Violet	Turquoise	Red
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x (cm)

Trial 1	_____	_____	_____
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Trial 2	_____	_____	_____
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Trial 3	_____	_____	_____
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Trial 4	_____	_____	_____
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Mean x (cm)	_____	_____	_____
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λ (nm)	_____	_____	_____
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The Rydberg Constant, R_H

ΔE	_____	_____	_____
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$\frac{1}{n_i^2}$	_____	_____	_____
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Construct a linear graph of ΔE vs $\frac{1}{n_i^2}$. Determine the equation for the best-fit line of this graph.

Equation of best-fit line: _____

Rydberg Constant (R_H) (include units): _____

(Be sure to include this graph in when you hand-in your laboratory report sheet