BIRZEIT UNIVERSITY
Physics Department

Physics 111

Experiment No. 1

Density of a metal and distance between atoms

Student's Name:_____ Student's No.: _____

Partner's Name:_____ Partners' No. : _____

Instructor: _____ Section No.: _____

Date: _____

– Abstract:

1) The aim of the experiment:

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2) The method used: .....

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3) The main results are:

ρ = ±

Spacing between atoms (a) =

– Theory:

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– Procedure:

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– Data:

Mass (M) = ±

	1.	2.	3.	4.	5.	6.	Average
Length L (cm)							
Width W (cm)							
Thickness T (cm)							

– Calculation:

$\overline{X}$ (cm)	σ_s (cm)	σ_m (cm)
$\overline{L} =$	$\sigma_s(L) =$	$\Delta\overline{L} =$
$\overline{W} =$	$\sigma_s(W) =$	$\Delta\overline{W} =$
$\overline{T} =$	$\sigma_s(T) =$	$\Delta\overline{T} =$

$\overline{V} = \overline{L} \times \overline{W} \times \overline{T} =$ .....

$\frac{\Delta \overline{V}}{\overline{V}} = \frac{\Delta \overline{L}}{\overline{L}} + \frac{\Delta \overline{W}}{\overline{W}} + \frac{\Delta \overline{T}}{\overline{T}} =$ .....

$\Delta \overline{V} =$ .....

$\rho = \frac{M}{\overline{V}} =$ .....

$\frac{\Delta \rho}{\rho} = \frac{\Delta M}{M} + \frac{\Delta \overline{V}}{\overline{V}} =$ .....

$\Delta \rho =$ .....

$a = \sqrt[3]{\frac{A_w}{\rho \times N_A}} =$ .....

– Results and Conclusion:

ρ = ±

Spacing between atoms (a) =

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