

Lab 3 - Lab Extended Data Table

	Isotope A	Isotope B	Isotope C
Bean Color (ID)	White	Brown	Black
Bean Count (Each Isotope)	160	80	200
Weighing Boat Mass (Use same mass)	2.5g	2.5g	2.5g
Mass Isotope Beans	52.0g	80.2g	71.3g
Mass Isotope Beans (w/o weighing boat) (bean mass - boat)	$52.0g - 2.5g = 49.5g$	$80.2g - 2.5g = 77.7g$	$71.3g - 2.5g = 68.8g$
Total Bean Count (count A + B + C)	$160 + 80 + 200 = 440$		

Lab Calculations

	Isotope A	Isotope B	Isotope C
Fractional Abundance (Bean Count / Total Bean Count)	$\frac{160}{440} = 0.36$	$\frac{80}{440} = 0.18$	$\frac{200}{440} = 0.45$
% Abundance (Frac Abun x 100%)	$0.36 \times 100 = 36\%$	$0.18 \times 100 = 18\%$	$0.45 \times 100 = 45\%$
Mass of 1 Bean (Total Mass / Count)	$\frac{49.5g}{160 \text{ beans}} = 0.31 \frac{g}{\text{bean}}$	$\frac{77.7g}{80 \text{ beans}} = 0.97 \frac{g}{\text{bean}}$	$\frac{68.8g}{200 \text{ beans}} = 0.344 \frac{g}{\text{bean}}$
Partial Mass (Frac Abun x Mass 1 Bean)	$0.36 \times 0.31g = 0.11g$	$0.18 \times 0.97g = 0.17g$	$0.45 \times 0.34g = 0.15g$
Average Atomic Mass (Add Partial Mass)	$0.11g + 0.17g + 0.15g = 0.43g/\text{bean}$		