

Shrink Plastic Measurement Worksheet

Data Table

Before Shrinking	Shrink Plastic 1	Shrink Plastic 2	Shrink Plastic 3		
L (cm)					
W (cm)					
H (cm)					
Mass (g)					
Area (cm ²)					
Volume (cm ³)					
Density (g/cm ³)					
After Shrinking	Shrink Plastic 1	Shrink Plastic 2	Shrink Plastic 3		
L (cm)					
W (cm)					
H (cm)					
Mass (g)					
Mass (g) Area (cm ²)					
Mass (g) Area (cm ²) Volume (cm ³)					

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Post-Lab Questions

1. Calculate the loss in dimension and the percent loss in dimension (shrink rate) for the length, width, and area of each shrink plastic sample using Equations 4 and 5.

Loss in dimension = Original dimension (cm) – Final dimension (cm)

Equation 4

Percent Loss in Dimension $= \frac{\text{Loss of dimension (cm)}}{\text{Original dimension (cm)}} \times 100\%$									Equation 5		
	Length (cm)			Width (cm)			Area (cm ²)				
Sample Number	1	2	3	1	2	3	1	2	3		
Original measurements (cm)											
Final measurements (cm)											
Loss in dimension (cm)											
Percent loss in dimension (%)											

2. Did the shrink plastic samples shrink uniformly in all directions (length, width and height)?

- 3. How did the thickness (height) and volume of the shrink plastic samples compare before and after they were shrunk?
- 4. How did the calculated densities of the three shrink plastic samples compare before and after they were shrunk? Calculate the average density of the three shrink plastic samples after shrinking.
- 5. How does the calculated average density of the samples compare to the density of water?
- 6. How do the results of this activity relate to the law of conservation of mass?