QUESTIONS

1 What error would be introduced into the determination of the density of the regularly shaped solid if the solid were *hollow*? Would the density be too high or too low?

2. What error would be introduced into the determination of the density of the irregularly shaped metal pellets if you had not stirred/shaken the pellets to remove adhering *air bubbles*? Would the density be too high or too low?

3. An alternative procedure for determining the density of a liquid is to pipet a sample of the liquid into a weighed flask and then re-weigh the flask to determine the mass of liquid transferred. Would this alternative procedure be likely to give greater precision in the density determination? Why?

4. Your data for the density of sodium chloride solutions should have produced a straight line when plotted. How could this plot be used to determine the density of any concentration of sodium chloride solution?

5. Why was it necessary to determine the *temperature* during the determination of the density of the sodium chloride solutions? Which factor—mass or volume—used in calculating the density would be affected by temperature? Explain.

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