Name: _

2

Lab Quiz 04: Specific Heat

Answer each of the following questions using the information you collected during the lab. Please submit your completed quiz before you leave the lab. No papers will be accepted after the end of the lab period.

Trial	Sample Mass m _s (g)	Sample Temp Ts (°C)	Empty Beaker m1 (g)	Full Beaker m² (g)	WATER MASS mw=m2-m1 (g)	Water Temp Tw (°C)	Final Temp T _f (°C)	Specific Heat cs (cal/ g·°C)
1		100°						
2		100°						

1. (14 points) Complete the table below using the measurements you recorded and the calculations you performed.

(4 points) Show your work to calculate the specific heat of Cube 1.

- 3. (2 points) Based on your results, Cube 1 is most probably made of A) aluminum. C) iron.
 - B) brass. D) lead.
- (4 points) Based on your experimental value for Cube 1, calculate the percent error compared to the accepted value for 4. the specific heat.
- (4 points) Show your work to calculate the specific heat of Cube 2. 5.
- (2 points) Based on your results, Cube 2 is most probably made of 6.
 - A) aluminum. C) iron. D) lead. B) brass.
- (4 points) Based on your experimental value for Cube 2, calculate the percent error compared to the accepted value for 7. the specific heat.
- (2 points) Which cube initially absorbed the greater amount of heat from the boiling water? 8.
 - A) The cube which raised the water temperature more (higher T_f).
 - B) The cube which did not raise the water temperature as much (lower T_f).
 - C) Both cubes absorbed the same amount of energy! Since both cubes went from room temperature to 100°C, they must have absorbed the same total amount of energy.
 - D) Trick question! Neither cube absorbed any energy from the boiling water.

- E) water.
- F) none of these!

E) water. F) none of these!