

Specific Heat Of Metal Lab Answers

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Specific Heat Of Metal Lab

THE SPECIFIC HEAT OF A METAL - Bainbridge Island School ...

Lab: Specific Heat of a Metal Experimental Question: What is the specific heat of an unknown metal? Which metal is it? Safety: Wear your safety goggles Do not touch hot equipment and handle hot glassware carefully Return or dispose of all materials according to the instructions given by your teacher Materials available: 250-mL beaker 600-mL

LAB FOUR - Millersburg Area School District

LAB FOUR 2 Specific Heat of a Metal There are five measurements that must be made to determine the specific heat of the unknown metal: 1 Determine the mass of the piece of metal 2 Heat the metal piece to a known temperature and measure this temperature precisely This is the

Specific Heat of a Metal Laboratory

the specific heat of a metal The equation we will use to do this is: $Q = m \times C_p \times \Delta T$ Materials Balance Tap water Calorimeter Metal sample 250-mL beaker Thermometer 50-mL graduated cylinder Hot plate Tongs Safety goggles Lab apron Procedure 1 Fill a 250 mL beaker with about 200 ml of water Place it on your hot plate

Lab: Specific Heats of Metals - WordPress.com

In this investigation, you will use a simple calorimeter and your knowledge of the specific heat of water to determine the specific heat of lead Procedure 1 Heat 250 mL of water in a 400-mL beaker until it is boiling gently 2 While the water is heating, use an electronic balance to determine and record the exact mass of the metal sample

Specific Heat Lab Report06.doc ken's completed

the specific heat of the metal was a smaller number than it actually is I do not believe we are the only people in history to do this lab right and everyone else is wrong

Specific Heat of Metals - Chemistry

4 Use the same equation to calculate the specific heat of each metal (Rearrange the equation to solve for specific heat, and assume that the amount of heat lost by the metal equals the amount of heat gained by the water) Record the results in Data Table 1 Analyze and Conclude I Applying Concepts To calculate each metal's specific heat, you

Finding the Specific Heat of a Substance

Specific heat is the amount of energy, measured in joules, needed to raise the temperature of one gram of the substance one Celsius degree Often applied to metallic elements, specific heat can be used as a basis for comparing how different substances absorb and transfer energy To measure specific heat in the laboratory, a calorimeter of some

Specific Heat - Flinn

trend—the larger the atomic mass of a metal, the lower its specific heat Copper and zinc have very similar atomic masses, and identical specific heat values Table 1 Metal Aluminum Copper Lead Silver Tin Zinc Specific Heat (J/g °C) 0899 0385 0129 0234 0222 0385 Water is ...

Chemistry 108 lab Name Lab #2: Coffee Cup Calorimetry

Your unknown metal is one of the metals in the table below Use this table of specific heats to determine the identity of your metal Choose the metal with the specific heat that is closest to your experimental value Metal Specific Heat (J/goC) Aluminum 0900 Bismuth 0126 Tin 0226 Nickel 0443 My metal is ...

Lab 15. Heat Capacity

Lab 15 Heat Capacity By Jamu Alford With help from Sari Belzycki Abstract Using a Styrofoam cup as a calorimeter the specific heat of water was found to be $53 \pm 0.2 \text{ J/K!1g!1}$ Solving for the specific heat, $C_v = Nmgh/m\Delta T$, m is the mass of the shot and, g is of course gravity The length of ...

General Physics I Lab H1 Specific Heat and Latent Heat of ...

The specific heat of water is $4,200 \text{ J/kg } ^\circ\text{C}$ If an object of mass M is made of a substance with specific heat c, then the heat, ΔQ , required to raise the temperature of that object by an amount ΔT is: $\Delta Q = Mc \Delta T$, if the specific heat c is constant In Part I of the experiment, you will measure the specific heat of aluminum, copper and

HEAT CAPACITY - UPSCALE

Heat a metal block in boiling water (temperature T_b) and transfer it quickly to the calorimeter The final temperature will be T_2 Consider carefully the systematic errors present in this experiment Determine the specific heat of one of the metal blocks, using Equation 2 What temperature, or temperature range, does your value correspond to?

EXPERIMENT 14: CALORIMETRY Introduction: Background

The specific heat of the unknown metal will be used to estimate its atomic mass The identity of the metal can be guessed from the Law of Dulong and Petit, stating that the atomic mass of a solid element equals 26 divided by the specific heat, $\pm 10\%$ Atomic mass = $26 / (\text{specific heat})$ Safety No hazardous chemicals are used but

MEASUREMENT OF SPECIFIC HEAT

3 Using equation 4, calculate the metal's specific heat, c_{metal} , given that the specific heat of the calorimeter, c_{cal} , is $900 \text{ J/kg}^\circ\text{C}$ and the specific heat of water, c_{water} , is $4186 \text{ J/kg}^\circ\text{C}$ 4 Using the values for the specific heats of three metals given here, try to identify the metal (A

Use tongs and wear goggles

P31220 lab 2 Experiment 1: Specific heat of a metal A sample of metal (or anything else) is heated to 100°C (or other known temperature) in a bath of boiling water The temperature of the water in the calorimeter is measured before and after adding the sample The specific heat capacity of the metal can be determined from the maximum

LABORATORY I: CONSERVATION OF ENERGY AND HEAT

The specific heat of copper is given in a table at the end of this lab PROBLEM # 1: TEMPERATURE AND ENERGY TRANSFER Lab I - 3 WARM-UP Applying conservation of energy, you can then determine the metal's specific heat However, you know that some energy will be transferred between the water bath and the

Experiment 6 Coffee-cup Calorimetry

Specific Heat of a Metal You will find the specific heat of a metal by equating the heat lost by the metal (at high temperature) to the heat gained by the water reservoir at a lower temperature when they are mixed in the calorimeter The metal must first be heated and its temperature measured, $T_{\text{initial}}(\text{metal})$

SPECIFIC HEAT - STLCC.edu

Small pieces of ice two metal solids Paper towels INTRODUCTION: Heat capacity of a body is the quantity of heat required to raise the temperature of the body by 1°C The specific heat of a substance is the heat capacity per unit mass Thus, heat capacity = mass x specific heat

Specific Heat Lab Questions - murrieta.k12.ca.us

Specific Heat Lab Questions Analysis and Conclusions 1 For each trial, calculate the mass of the room-temperature water, the change in temperature of the metal, and the change in temperature of the