

# Energy Transfer Calorimeter

## ET-8499

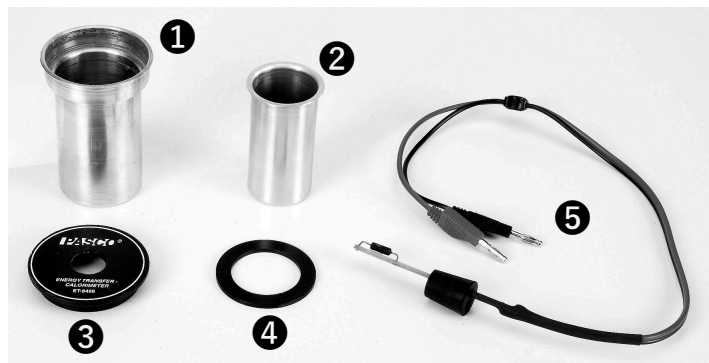
**PASCO**

Quick Start Guide

012-08808B



## What's Included



### 1 Outer Cup

Holds the inner cup and acts as an insulator. Its mass does not need to be included in any calculations.

### 2 Inner Cup

Holds the water and investigation samples. Its mass should be included in heat transfer equations. Made of aluminum.

### 3 Insulating Lid

Features a hole for the Heating Resistor Assembly or the #2 rubber stopper.

### 4 Insulating Spacer

Aligns the inner and outer cup to leave a small air space in between that acts as an insulator. The spacer rests on the step inside the outer cup.

### 5 Heating Resistor Assembly

Heats the water in the inner cup. Permanently mounted in a two-hole stopper, where the second hole provides access for a temperature probe. The cable end plugs directly into a power supply with banana terminals.

### 6 One-Hole Stopper, #2 (not shown)

Insert into the insulating lid when not using the heating resistor assembly. Use the hole to insert a temperature probe or thermometer.

## Equipment Setup



**CAUTION:** Do not touch the resistor. Touching the resistor may result in burning of the skin.

1. Place the spacer inside the outer cup so it is seated on the lip.
2. Place the inner cup into the outer cup through the hole in the spacer.
3. Place the lid on top.
4. Insert the heating resistor assembly through the hole in the lid making sure the stopper is fit snugly.

**Note:** If the heating resistor is not being used, insert the one-hole stopper.

5. Connect the heating resistor assembly to a power supply.

**CAUTION:** To avoid damaging the product:

- Only apply power to the resistor when it is immersed in water.
- Do not apply more than 10 volts.

6. Insert a temperature probe or thermometer in the second hole.

## Experiments

Print-ready experiment worksheets are available to download from the PASCO website. Go to [pasco.com/freelabs](http://pasco.com/freelabs) and enter **ET-8499** in the **Part No.** field to access all experiments related to the Energy Transfer Calorimeter.

## Technical Support

Contact PASCO Technical Support for assistance with this or any other PASCO product.

Phone USA: 1-800-772-8700 (Option 4)  
International: +1 916 462 8384

Online [pasco.com/support](http://pasco.com/support)

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The European Union WEEE (Waste Electronic and Electrical Equipment) symbol and on the product or its packaging indicates that this product must not be disposed of in a standard waste container.