

AP Physics Lab

Lab 11-A: *Mechanical Equivalent of Heat*

Equipment:

- cardboard tube and funnel
- lead shot
- meter stick
- electronic balance
- CBL & temperature probe

Purpose:

- Calculate and compare the work done and heat added to a sample of lead shot.

Procedures:

- Measure all quantities needed to calculate the work done on the lead shot.
- Measure all quantities needed to calculate the heat added to the lead shot.
- Invert the tube of lead shot at least 50 times.

Report:

1. Record all measurements and calculate the work done on the lead shot.
2. Record all measurements and calculate the heat added to the lead shot.
3. Calculate the percentage loss of energy in the system.
4. If all other factors remained constant, would this percentage change for a greater mass of lead shot? Explain your answer.