

### Question #85057, Chemistry / General Chemistry

Using the heat equation solve this. What mass, in grams, of aluminum fins could 2291 J of energy heat from 13.34 degrees C to 23.51 degrees C? Aluminum has a specific heat of 0.897 J/(g\*degrees C).

#### Solution

According to the heat equation:

$Q = cm\Delta T$ ; where Q – heat; c – heat capacity;

$$m = \frac{Q}{c\Delta T} = \frac{2291}{0.897 \times (23.51 - 13.34)} = \mathbf{251.1 \text{ (g)}}$$

#### Answer

**251.1 g** of aluminum fins could 2291 J of energy heat from 13.34 degrees °C to 23.51 degrees °C.

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