Answer on Question #78020, Chemistry / General Chemistry

A 75.0 g object needs 995 Joules to increase its temperature by 8.0 oC. Its specific heat capacity is _____.

A. 0.229 J/goC
B. 22.9 J/goC
C. 0.229 × 102 J/goC
D. 2.29 × 102 J/goC
E. None of the Above

$$Q = \mathrm{c} * m * \Delta\mathrm{t},$$

where
Q is the heat energy;
c= the specific heat J/g°C;
m= the mass of the object/substance, g;
Δt= the change in temperature in °C.

$$c = \frac{Q}{m * \Delta\mathrm{t}},$$

$$c = \frac{995J}{75.0\mathrm{g} * 8.0°\mathrm{C}} = 1.67\mathrm{J/g°C}$$

ANSWER:E