A 15.75g PIECE OF IRON ABSORBS 1086.75 JOULES OF HEAT ENERGY,AND ITS TEMPERATURE CHANGES FROM 25C TO 75C. CALCULATE THE SPECIFIC HEAT CAPACITY OF IRON.

Solution.

$Q = c * m * (t_2 - t_1)$ -HEAT ENERGY ABSORBED BY PIECE OF IRON

$c = \frac{Q}{m*(t_2-t_1)} = \frac{1086.75 \text{ joules}}{0.01575\ kg*(75\ ℃-25℃)} = 1380 \frac{joules}{kg*℃}$ - THE SPECIFIC HEAT CAPACITY OF IRON