

Heat capacity (usually denoted by a capital C, often with subscripts), or thermal capacity, is the measurable physical quantity that shows the amount of heat required to change the temperature of an object or body by a given amount.

If heat capacity is 0.61 calories per gram per degree C, mass of methanol is 93 g, and difference in temperature is 90 (from -35 to 55), the calories of heat are required to heat can be found by formula, that relates mass, temperature and heat capacity :

$$Q=C*m*(T_2-T_1),$$

where

C is heat capacity

m is mass

T₂ and T₁ is temperature at the end and the beginning of the process.

$$Q=0.61*93*90=5105,7 \text{ calories}$$