

## Calorie Definition

A calorie is a unit of measurement for energy. In most fields, it has been replaced by the joule, the SI unit of energy. However, it remains in common use for the amount of energy obtained from food. Many different definitions for the calorie have emerged during the 19th and 20th century. They fall into two classes:

1. The small calorie or gram calorie approximates the energy needed to increase the temperature of 1g of water by 1 °C. This is about 4.185 J.
2. The large calorie or kilogram calorie approximate the energy needed to increase the temperature of 1 kg of water by 1 °C. This is about 4.185 kJ. and exactly 1000 small calories.

In scientific contexts, the name “calorie” refers strictly to the gram calorie, and the unit has the symbol cal. SI prefixes are used with this name and symbol, so the kilogram calorie is known as the “kilocalorie” and has the symbol kcal.

Colloquially, and in nutrition and food labelling, the term “calorie” almost always refers to the kilogram calorie. This applies only to English text; if an energy measurement is given using a unit symbol then the scientific practice prevails there. A convention of capitalising “Calorie” to refer to the kilogram calorie, with uncapitalised “calorie” referring to the gram calorie, is sometimes proposed, but neither recognized in any official standards, nor commonly followed. The conversion factor between calories and joules is numerically equivalent to the specific heat capacity of liquid water (in SI units).

For more information, please contact our SOLE Service Department.

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