

FISICA Y QUIMICA

FOOD ENERGY

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INTRODUCTION:

·The food energy is calculated for knew how many calories have your body from the food you eat. This energy is calculate with this ecuation:

$$Q_{water} = m_{water} c \Delta T$$

-***Q_{water}***:is the energyin the from of head captured by the water,expressed in calories{cal}

-***m_{water}***:is the mass of the water expresseed in grams{g}

-***c***:is the specific heat capacity of water ,which 1 calorie per gram per dsegree Celsius

-***ΔT***:is the change in temperature ,or the final temperature of the water minus the initial temperature of the water {°C}



Materials:



• Calorimeter Kit:

- large tin can
- small tin can
- bottle cork

- sewing needles
- gratuated cylinder
- immersion thermometer

- long lither
- digital scale



THE PROCES:

- First you should fill 100 mL of water with the graduated cylinder and fill a little can with it, then you must put food on top of the cork and put inside a big can.
- Second you must give fire with lighter, immediately put the little can on the fire with the immersion thermometer and wait until the fire goes out
- Finally you record the initial and the final temperature of the water. And so with all foods

THE RESULTS:

	{g}	T_i { °C}	T {°C}	Q{cal}	Q{cal/g}
-Scnaks	0.421	21°C	26°C	500 cal	1187,65
-Scnaks	0.434	21°C	25°C	400 cal	921,659
-Scnaks	0.437	21°C	24°C	300 cal	686,499
- Peanut	0.456	21°C	25°C	400cal	877,1930

SNACKS AVERAGE: 931,936 cal\g

PEANUT AVERAGE: 877,1930 cal \g

My conclusions:

- Theoric values

- Snacks: 4960 cal/g Peanut:5870 cal/g

- The experimental values are lower because not all the thermic energy pass to the water.