|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Food | Mass of food(g) | Initial temperature(C) | Final temperature(C) | Change in temp(C) | Volume of water (ml) | Energy transferred(j) | Energy content in food(per g) |
| Small marshmello | 0.78 | 27 | 38 | +11 | 9 | 36 | 46 |
| chips | 0.64 | 27 | 59 | +32 | 9 | 86 | 134 |
| Gummy bear | 2.25 | 28 | 43 | +15 | 8 | 142 | 63 |
| cracker | 2.04 | 26 | 66 | +40 | 8.5 | 343 | 168 |
| chips | 0.88 | 28 | 51 | +23 | 9 | 86 | 98 |
| oats | 2.82 | 28 | 52 | +24 | 10 | 284 | 101 |

Which food sample contained the most energy? How do you know? Can you suggest a reason for this?

Cracker had the most energy this might be because it contains most fat and fats have the most kj per grams.

How could you show that the water only gained energy from the burning food and not from the surroundings?

Probably by isolating the test tube in some container

What are the sources of error in your data collection?

Not all of the foods were burnt enough, some could burn more.

Some of the heat escaped, and some heat from the room was gained

How can you improve your method of data collection?

Maybe by increasing the number of attempts and making a more efficient way to gather the heat.