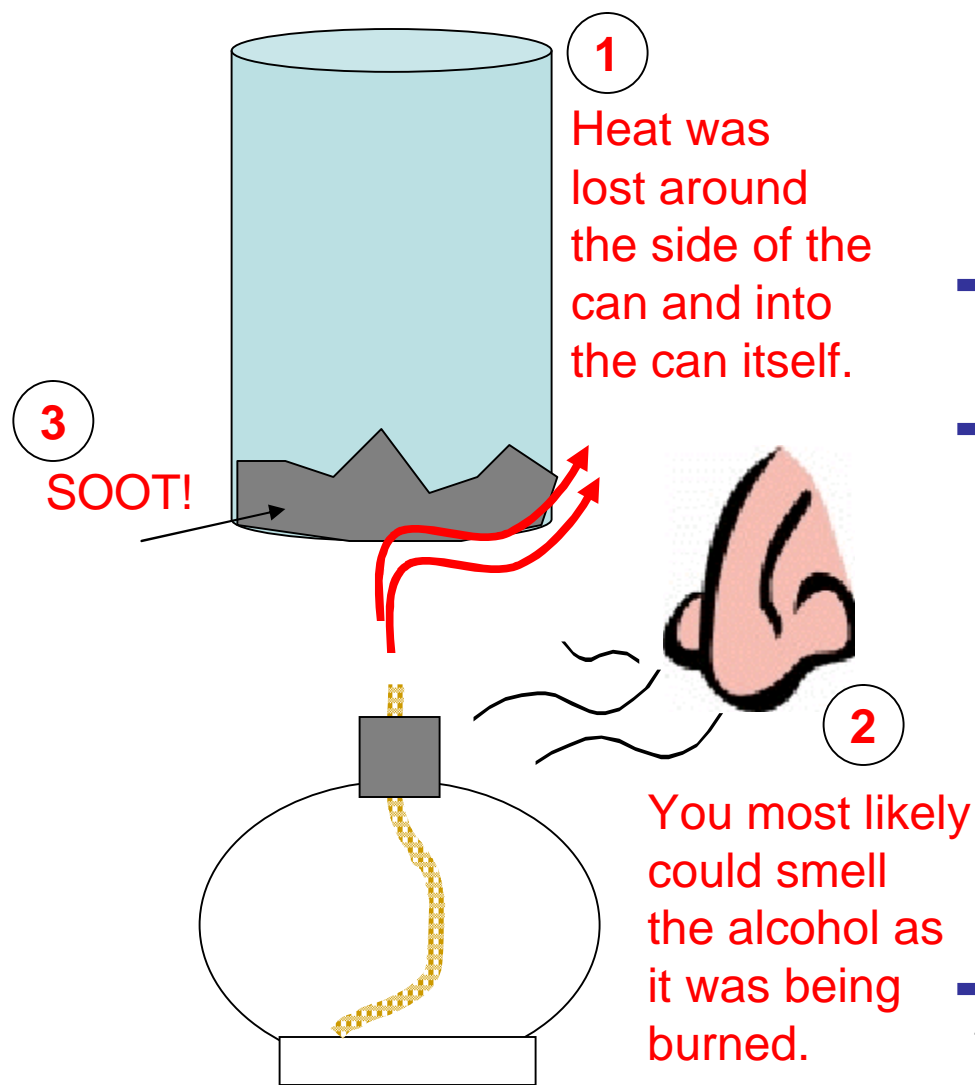


Without exception, the fuel results from the class are lower than the published values for these fuels (see table below). Consider the three numbered observations below. You most likely noticed these as you did the experiment. To what extent would each of these observations cause the calculated cal / g for your fuel to be too low? Explain.



Accepted heats of combustion for the fuels used in lab.

alcohol	heat of combustion* (cal / g)
isopropanol (C ₃ H ₈ O)	7920
butanol (C ₄ H ₁₀ O)	8650
hexanol (C ₆ H ₁₄ O)	9320
octanol (C ₈ H ₁₈ O)	9700
paraffin wax (~C ₄₀ H ₈₂)	10,000

*From National Institute of Standards and Technology (NIST).