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Low-cost methods and devices to measure the heat capacity of gases.

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The measure of the heat capacity of gases is one of the fundamental experiments in scientific disciplines. Usually, the determination of the heat capacity requires the knowledge of the speed of sound. To measure the speed of sound, the classical experimental setup consists of a Kundt's tube, one oscilloscope, and a function generator to determine the wavelength of the wave. While the Kundt's tube can be relatively easy to replace with Do It Yourself materials, the function generator and the oscilloscope are still the most expensive part of the experimental setup. This experiment, oriented for educational purposes, doesn't require high-level precision instruments, and possible alternatives to an oscilloscope and function generators are possible. In the presented work, two low-budget instrument alternatives are presented.

The possibility to reduce the budget is an opportunity to introduce new laboratory activities in secondary schools or a case of necessity in the tertiary institutions.

Apply to be considered for a student ; award (Yes / No)?

N

Level for award;(Hons, MSc, PhD, N/A)?

N/A

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