Sound Lab

Nguyen Ha Minh Anh

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1. Overview

The speed of sound in air at standard conditions is 344 m / s (769.5 mph or 1238 km / h). From there, we can see to be able to measure the time that the sound travel with some simple equipment is very difficult. However, we can measure the velocity of sound indirectly using a device known wavelength, such as tuning forks. Thus, we can know the wavelength of the sound waves. Then, we can use the formula:

$$v = f\lambda$$

Therefore, We can get the velocity of the sound.

2. Data:

	Frequency (Hz)	Wavelength (m)	Length of resonance (m)
A	534	0.645	0.1594
B	378	0.888	0.2003
C	249	1.332	0.4003

3. Calculation:

By using the formula above, we have:

	Velocty (m/s)	Real Length (m)
A	344.43	0.16125
B	335.664	0.222
C	331.668	0.333