

# Sound Lab

Viet Hoang

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## 1 Introduction

The velocity with which sound travels in any medium may be determined if the frequency and the wavelength are known. The relationship between these quantities is:  $v=f\lambda$ .

## 2 Method

You used a long tube, an iphone with the tone application, water and ruler to determine the height of water. First, we put amount of water in and use the iphone to figure the best sound. We did it three times with different levels of water.

## 3 Result

By using the formula i mentioned above, we collected three different results.

Result 1:  $f= 512$  Hz

$L= 16,5$  cm  $v=337.92$  m/s

Result 2:  $f= 384$  Hz

$L= 22$  cm  $v= 337.92$  m/s

Result 3:  $f= 320$  Hz

$L= 25$  cm  $320$  m/s

### 3.1 Error

The error in number might occur with a reason such as the sound was declared by the hear of student so it might be incorrect.

### 3.2 Conclusion

After the lab about determining the velocity of sound in air, I have a better idea about resonance and the basic way that scientist use to find velocity. It is not as hard as i thought at first.