or, $v_o = \ldots\ldots\ldots\ldots$

or, $v_o = \ldots\ldots\ldots\ldots$

$\therefore$ $v_o = \ldots\ldots\ldots\ldots m/s$

PERCENTAGE ERROR:

Standard value of velocity of sound at NTP, $v_s = \ldots\ldots\ldots\ldots \ m/s$

Observed value of velocity of sound at NTP, $v_o = \ldots\ldots\ldots\ldots \ m/s$

Therefore, $\%\ error = \left|\frac{Standard\ value - observe\ \ value}{standard\ value}\right| \times 100\%$

$= \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$

$= \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$

$= \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$

$= \ldots\ldots\ldots\ \%$

RESULT:

The velocity of sound at laboratory temperature ($\ldots\ldots\ {}^oC$) has been found to be …. ... and the velocity of sound at NTP has been found to be …… … with … …. error.

CONCLUSION:

Thus, the velocity of sound in laboratory temperature is found by using resonance air column method.

SOURCES OF ERROR:

1. Error may be due to the confusion on distinguishing the resonance.
2. Error may be due to inclined position of resonance tube.
3. Error may be due to carelessness of experimenter.

PRECAUTIONS:

1. The resonance tube should be set vertical.
2. The tuning fork should be neat and clean and the vibrating tuning fork should be held horizontally just above the tube.
3. The water level should be changed very slowly.
4. Resonating points should be carefully identified.
5. The reading of the water level should be taken at the lower meniscus.

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