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how to calculate

Velocity of the sound

Velocity (m/s) = Distance (m) / Time (s) = 0.740 m / 0.000124 s = 5967 m/s

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Volume

Volume (m^3) = Lenght (m) * Height (m) * Width (m)
i.e.1 in meter: 0.20 m * 0.01 m * 0.10 m = 0.0002 m^3
i.e.2 in cm: 20 cm * 1 cm * 10 cm = 200 cm^3

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Density

Density (g/cm^3) = Mass (g) / Volume (cm^3) = 60 g / 200 cm^3 = 0.30 g/cm^3

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Resonance Coefficient or Quality (Q)

Q (dimensionless param) =Velocity / (Density * 100) = 5967 / (0.30 * 100) = 198.9

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Young's Modulus (E)

E (kg/cm^2) = [Velocity (m/s)]^2 * Density (g/cm^3)
= 5967^2 m^2/s^2 * 0.30 g/cm^3 = 106815 kg/cm^2

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Specific Young's Modulus (Es)

Young's modulus over density

Es (m^2/s^2) = [Velocity (m/s)]^2 = 5967^2 m^2/s^2 = 35605 m^2/s^2

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Frequency of “tap tone” in a tablet of wood

Freq (Hz) = 1.028 * [Thickness/Length^2] * Velocity (m/s)
= 1.028 * [0.015 m / 0.40^2 m^2] * 5840 m/s = 562 Hz