

Rod Permeability vs. Rod Length divided by Rod Diameter

The inductance of the coil, provided the winding covers the whole length of the rod is given by:

$$L = \mu_0 \mu_{rod} \frac{N^2 A}{\ell} 10^{-4} (\mu H)$$

Where:

N = number of turns

A = cross sectional area of rod (cm^2)

ℓ = length of coil (cm)

$\mu_0 = 4\pi \cdot 10^{-7}$

