

Simple Pendulum - Data Sheet

A Simple Pendulum is a mass suspended from a string that starts oscillating from a small angle (under 15°) relative to the pendulum's equilibrium position.

Period (T) is the time a simple pendulum takes for one complete swing.

$$T_t = 2\pi \sqrt{\frac{l}{g}}$$

T_t – Theoretical period of a simple pendulum

l – length of the pendulum

g – acceleration due to gravity

$$T_e = \frac{Total\ Time}{Number\ of\ Swings}$$

T_e – Experimental period of the simple pendulum

If you measure the period using a stopwatch, let the pendulum swing 10 - 20 times, to minimize error introduced through reaction time. If you measure the period using a photogate or through video analysis you can let the pendulum swing only one time.

[illegible]