## G-Force Calculator

Centimeters

The measurement of centrifuge force holds significant importance in laboratory settings. Typically, the centrifuge is configured according to the specifications provided by collection tube manufacturers. In cases where tube specifications are not explicitly defined, reagent manufacturers' specifications are employed. Furthermore, automated lab testing machine manufacturers may stipulate specific force requirements to ensure compliance with calibration specifications. This adherence to precise force measurements is essential for accurate and reliable laboratory processes and results.

Rotations radius [inches] Rotations radius [cm] Example [0] SPEED - REVOLUTIONS PER MINUTE RELATIVE CENTRIFUGAL FORCE - GRAVITIES To find the relative centrifugal force at a radial distance of 10 cm from the center of rotation when operating the centrifuge at a speed of 3000 r.p.m., place a straightedge on the chart connecting the 10 cm point on the Rotating Radius Scale (A) with the 3000 r.p.m. point on the Speed Scale (B). Read the point at which the straightedge intersects the Relative Centrifugal Force Scale (C) - in this case, 1000 x gravity. Similarly, if the desired r.c.f. is known, the necessary speed for a given rotating radius may be determined by connecting the two known points and reading the intersection of the straightedge with the Speed Scale. 5.5 Equation for Calculating R.C.F. R.C.F. = .0000118 x r x N2 3.5 R.C.F. = relative centrifugal force (gravities) r = radius from center of rotation to 2.8 bottom of tube (cm) N = rotating speed (rev. per minute) 2.3 0.5