

Calculating RCF from known RPM and Radius

General Rcf calculation equation:

$$RCF = 11.2 * R * \left(\frac{RPM}{1000}\right)^2$$

Where:

RCF = rotational centripetal force (xg)

R = radius of centrifuge from center of rotation to bottom of the tube (cm)

RPM = speed of centrifuge rotation (rotations per minute)

RCF calculation for Champion S-33 Centrifuge:

$$RCF = 11.2 * 14.2cm * \left(\frac{RPM}{1000}\right)^2$$

Example Calculation:

At 3300rpm, the Rcf for S-33 centrifuge is 1732xg because:

$$RCF = 11.2 * 14.2cm * \left(\frac{3300}{1000}\right)^2$$

$$RCF = 1732 \text{ xg}$$