

# Mass Of A Baseball

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| Bibliographic Entry  | Result<br>(w/surrounding text)  | Standardized<br>Result |
|--|---|------------------------|
| <a href="#">Objectives of the Game</a> . <i>Rules of Baseball</i> . Major League Baseball Enterprises, 1998. | "It shall weigh not less than five nor more than 5 ¼ ounces avoirdupois"                    | 142–149 g              |
| <i>The Cultural Encyclopedia of Baseball</i> . North Carolina: McFarland & Company, 1997.                    | "The final weight is required to be between 5 ounces and 5¼ ounces"                         | 142–149 g              |
| Adair, Robert K. <i>The Physics of Baseball</i> . New York, 1990.  | "... are required to change the motion of the 5 1/8 ounce ball from a speed of 90 mph ...." | 145 g                  |
| Author's measurement of a Wilson Baseball (Model A1001).   | "142.54 g"  | 142.54 g               |

Baseball was invented around the last quarter of the 1800s. In the game of baseball, we all know that the ball is the main object in the game. A baseball is a small, round, and hard. The weight of a baseball must be between 5 and 5 ¼ ounces (142 to 149 grams) and its circumference from 9 to 9 ¼ inches (22.9 to 23.5 centimeters).

The formation of the ball begins with a ½ ounce (14 g), 2.9 inch (7.4 cm) diameter cork core. A layer of black rubber is then applied followed by a layer of red rubber each weighing 7⁄8 of an ounce (25 g). Afterwards, 121 yards (111 m) of blue-gray wool followed by 45 yards (41 m) of white wool yarn are added to the outside. The ball is then wrapped in cowhide covering held together by 216 stitches and some rubber cement. Red stitches are placed on the ball to allow pitchers to throw curve balls. Curve balls curve since the air resistance on the stitches is non-uniform.

From my experiment of weighing a baseball, the result came out to be 142.54 grams which fits within the accepted range of 142 to 149 grams.

Christina Lee -- 1999

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- [Mass of a baseball](#)
- [Salary of a baseball player](#)
- [Speed of the fastest pitched baseball](#)

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- [Regarding short wavelengths of light](#), Bad Astronomy Bulletin Board



The Physics Factbook  
Edited by Glenn Elert  
Written by his students