
1. Test weight

Test weight is the weight of a known volume of grain expressed in kilograms per hectolitre (kg/hL).

Equipment needed to determine test weight:

0.5-litre (0.5-L) measure

A cylindrical shaped cup with an inside diameter of approximately 90 millimeters (mm) and a height of approximately 77.5 mm. The 0.5-L measure is calibrated to contain 500 millilitres (mL) of water, ± 1 mL, at 20 °C.

Cox funnel

A funnel with a 3.81 centimetre (cm) opening and a drop of 4.41 cm, measured from the opening in the funnel to the top of the 0.5-L measure, used to uniformly direct the flow of grain into the measure.

Striker

A piece of round hardwood, 2.2 cm in diameter and approximately 23 cm in length.

Scale

Any electronic metric scale approved for use in trade by Measurement Canada. The scale must hold a current Measurement Canada certificate.

Test weight conversion charts

Charts used to convert the weight of grain in the 0.5-L measure from grams to kilograms/hectolitre. These [charts](#) are available on the website of the Canadian Grain Commission. Alternatively, the [test weight calculators](#) can be used.

Procedure

1. Fill the 0.5-L measure to overflowing with the grain to be tested.
2. Ensure the slide is inserted into the Cox funnel.
3. Pour the contents of the 0.5-L measure, plus an extra handful, into the Cox funnel.
4. Place the 0.5-L measure on a solid base.
5. Position the Cox funnel on top of the 0.5-L measure so that the notched legs of the Cox funnel fit securely onto the measure's rim.
6. Remove the slide on the Cox funnel quickly so that the grain drops evenly into the 0.5-L measure.
7. Carefully remove the Cox funnel from the top of the 0.5-L measure so as not to disturb the grain.

▲ **Important:** Any jarring of the 0.5-L measure at this point will result in compaction of the grain in the measure and may produce inaccurate results.

8. Place the hardwood striker on the rim of the 0.5-L measure and using three equal zigzag motions, level off the grain so it is even with the top edge of the measure.
9. Pour the grain remaining in the 0.5-L measure into the scale pan.
10. Determine the weight of the grain in the scale pan in grams.
11. Convert the weight of grain in the 0.5-L measure from grams to kilograms per hectolitre using the Canadian Grain Commission's [test weight conversion charts](#) or [calculators](#).

Note: To account for the compaction of grains, the Canadian Grain Commission uses a correction, known as the compaction factor, to predict test weight values in units of kilograms per hectolitre. Data is used to develop statistical models that determine the relationship between the weight of uncompacted grain and the weight of compacted grain as determined by a Schopper chondrometer. Doubling the weight of uncompacted grain in a half litre measure and dividing by ten will not accurately predict test weight in kilograms per hectolitre. The Canadian Grain Commission's [test weight conversion charts](#) and [calculators](#) incorporate the compaction factor for various grains and must be used to convert test weight to kilograms per hectolitre.

Test weight is determined after the removal of dockage as defined in the cleaning procedures described for each grain, except for corn.

Test weight for corn is determined prior to removal of cracked corn and foreign material (CCFM). When the terms of delivery or terms of a contract state that dockage can be deducted from corn, the test weight is determined after the removal of dockage.

Note: Samples are graded 'Sample Account Light Weight' only if the test weight is lower than the minimum test weight established for the lowest grade of that grain and in accordance with the Order of Precedence as defined in the [Glossary](#) of this guide.