

Guidelines for Client-Wrapped Sample Preparation for Carbon and/or Nitrogen Analysis - Botanical Material

Contact Information/ Resources

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Note: Laboratory test results are reported on an As Received basis. The laboratory does not correct for moisture content on client-wrapped samples.

Sample Preparation Information

- **The optimum sample weight for dried and ground botanical material is 100-110 mg.** If you have limited sample material or sample material that is unusual in nature, please contact the laboratory.
- Prior to weighing samples, thoroughly wash your hands with soap and water to remove any potential contaminants.
- Weigh samples, using an analytical balance with a resolution of ± 0.1 mg, into tin foil cups. [The tins used by the lab are the Small Tin Foil Cups (#502-186-200) from LECO (<http://www.leco.com>).]
- Fold each sample tin by hand into a sealed tear-drop shape that does not exceed 8x10 mm.
- Store the filled tins in clean 24 or 48-well ELISA plates. Place the tins consecutively in the tray starting with cell "A1". Record the well location and weight of each sample (ideally in an Excel spreadsheet). Secure the lid to the ELISA plate with tape (see tip below).
- Submit samples, work request form, and a printout of the well location/weight record. (This record can be emailed to the lab as an Excel spreadsheet containing the sample weights and plate locations.)

Additional Tips

- The maximum number of samples per work request form is 100.
- Group samples within your set by potential carbon and nitrogen content and communicate this information to us (e.g., notation on the Excel spreadsheet referenced above).
- Samples suspected to be especially high in carbon and/or nitrogen should be submitted as separate sets to prevent instrument contamination and false elevation of results for other samples in the set.
- Inspect the samples for "leaks". Once the lid is secured with tape to the ELISA plate, invert the sample tray and shake gently to expose any leaking samples. Re-prepare any tins that lost sample material due to inadequate wrapping.

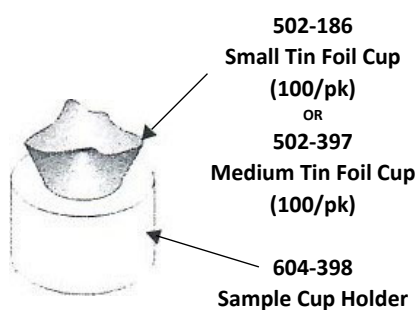
Plant Nitrogen and Carbon Sample Preparation from Leco TruSpec Manual:

Manual Preparation

1. Place the Sample Cup Holder on the balance.
2. Place foil into the Sample Cup Holder and tare the balance.
3. Remove the foil and the sample cup holder from balance and add sample to foil.
4. Place the sample cup holder and foil on balance and weigh.
5. Remove the foil from the sample cup holder and twist to seal.
6. Enter the mass in the spreadsheet or automatically by pressing print on the balance.

NOTE

- Sample size is dependent upon sample type, desired precision and optimal performance.



Add Sample



Twist Foil

NOTE: Gently squeeze the sample to remove any air while twisting to seal the sample. Once sealed, fold down the top a few millimeters and smooth out so that the sample is about 15 mm tall. Prepared sample should look like:

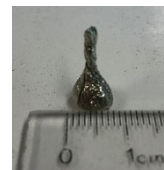


Figure 1
Sample Preparation—Manual Method