



^{13}C and ^{15}N ANALYSIS OF CARBON AND NITROGEN IN ORGANIC SOLIDS

Sample preparation:

Solid samples and standards are weighed into tin cups, with weights dependent on the %C and %N of the sample material. Generally, a target weight of 0.3 mg is used for plant and animal tissues, and 10- 15 mg is used for soils and sediments, however larger quantities are often needed for ^{15}N . When desired, small amounts of sample are weighed out separately into glass vials and acidified using hydrochloric acid (10%) for the elimination of inorganic carbon. ^{13}C values are then determined on both the acidified and un-acidified material.

Sample Analysis:

Analysis is carried out on a Finnigan Mat DeltaPlus IRMS with ConFlo III Interface coupled with a CE instruments EA 1110 CHN. Data is corrected and normalized using three international standards, IAEA-N1, IAEA-N2, IAEA-C6, and four calibrated internal standards, that bracket the samples. Standards are run at the beginning, middle and end of every run. The results are evaluated and corrected against standards run with the samples, and then reported against the international reference material.

The analytical precision for analysis is $\pm 0.3\%$.