

DATA BULLETIN

CNS determination in plant material with the vario MACRO cube

CNS analyses in plant material have strong requirements for the simultaneous measurement of very low S contents next to high C contents. The vario MACRO cube is very well suited for these types of analyses. Moreover, with the vario MACRO cube, high sample weights can be analyzed, which is especially important when inhomogeneous samples, such as soil and plant material, are analyzed.

The samples were weighed into tin boats. Tungsten trioxide powder was added to the sample in a ratio 1:1 to bind the earth alkaline/alkaline ions. Sulfanilamide was used to determine the daily factor. Each sample was analyzed four times. The average CNS content and its absolute standard deviation are given below.

SAMPLE	C [%]	N [%]	S [%]
birch leaf	47.9 ± 0.031	2.19 ± 0.019	0.153 ± 0.002
soy	41.2 ± 0.027	7.96 ± 0.057	0.415 ± 0.010
coarse colza meal	41.8 ± 0.032	5.72 ± 0.050	0.707 ± 0.010
algea	45.1 ± 0.026	10.0 ± 0.020	0.798 ± 0.012

The CNS content in plant material could be determined with a very high precision. The precision of 1.6% relative for the determination of only 0.15% S in the presence of 48% C show the large concentration dynamic of the vario MACRO cube CNS.

The vario MACRO cube is very well suited for simultaneous CNS analysis of plant material.

INSTRUMENT:

vario MACRO cube

DETAILS:

mode: CNS

sample: 50–80 mg plant material



Elementar Analysensysteme GmbH
Elementar-Straße 1
63505 Langenselbold (Germany)
phone: +49 (0) 6184 9393-0
info@elementar.de | www.elementar.de

