Application Note

AN-A-170309-E-01

CN analysis of wood and plant material with the vario MACRO cube

Task

CN determination in wood and plant material requires relatively high sample weights due to the inhomogeneity of the samples. The vario MACRO cube is optimized for the analysis of large sample weights.

Specification

	Instrument		Sample
Basis:	vario MACRO cube	**Quantity:**	100-200 mg
Mode:	CN	**Consistency:**	solid
Periphery:	manual pressing tool	**Preparation:**	not necessary

Procedure

Different wood and plant samples have been analysed using the vario MACRO cube. The samples were weighed into tin foil cups and analysed five times. The average CN content and its absolute standard deviation are given below.

Results

Sample	C [%]	N [%]
wood pellets	47.0 ± 0.064	0.053 ± 0.008
coarse colza meal	58.0 ± 0.16	3.29 ± 0.015
raw wheat	40.1 ± 0.14	2.02 ± 0.171
plant material	49.2 ± 0.011	1.68 ± 0.011
starch	39.8 ± 0.047	0.058 ± 0.009

The results show that the CN content in all samples could be analysed with a high precision.

Due to the high possible sample weight, the vario MACRO cube is very well suited for CN analyses of wood and plant material.

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