

# DATA BULLETIN

## *CNS analysis in plant material with the vario MAX cube*

The vario MAX cube combines Elementar's long tradition in macro analyzer design and state of the art electronics, software and robotics, making the vario MAX cube the leading analyzer in terms of analytical performance, reliability, cost and speed of analysis.

Different plant material samples were weighed into standard reusable ceramic crucibles without any pre-treatment. Tungsten oxide powder was added in a ratio 1:1 in order to bind alkaline and alkaline earth metal ions. For daily factor determination, sulfadiazine (C = 47.99%) and a low NS standard (N = 0.73% and S = 0.84%, Art.-Nr. 05 000 959) were used. All samples were analyzed five times. The average values and absolute standard deviations are given below.

SAMPLE	C [%]	N [%]	S [%]
grass	30.5 ± 0.025	2.68 ± 0.005	2.74 ± 0.081
sugar beet	40.5 ± 0.034	0.508 ± 0.005	0.037 ± 0.001
broccoli	37.4 ± 0.083	4.14 ± 0.026	0.790 ± 0.076
wheat flour	40.7 ± 0.037	1.130 ± 0.002	0.080 ± 0.005

The results show that all samples could be analyzed with a very high precision. The high possible sample weight of the vario MAX cube is especially important when inhomogeneous samples such as soil and plant material are analyzed.

The patented vertical sample feeding of the vario MAX cube with reusable open ceramic crucibles offers a particularly simple sample handling for solid and liquid samples. The automatic ash removal enables the operation of large series of samples without any problems.

### INSTRUMENT:

vario MAX cube

### DETAILS:

mode: CNS

sample: 250 mg plant material



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