

# DATA BULLETIN

## *CHNS analysis in liquid fuels with the vario EL cube*

The CHNS content of liquid fuels is usually determined as an indication for its quality and fuel value. Liquid fuel samples filled in capsules can be analyzed with the vario EL cube in its standard set-up.

The samples are weighed into tin capsules which are flushed with O<sub>2</sub> while sealing the capsules, in order to avoid ambient air inclusions. The daily factor has been determined using stearic acid and sulfanilic acid.

### INSTRUMENT:

vario EL cube

### DETAILS:

mode: CHNS

sample: 10 – 20 mg liquid fuel

SAMPLE	C [%]	H [%]	N [%]	S [%]
Fuel-1	85.05 ± 0.04	10.46 ± 0.02	0.302 ± 0.001	3.352 ± 0.008
Fuel-2	85.68 ± 0.05	10.72 ± 0.01	0.366 ± 0.006	2.373 ± 0.012
Fuel-3	84.89 ± 0.40	12.51 ± 0.06	0.027 ± 0.003	1.427 ± 0.032
Fuel-4	86.19 ± 0.09	13.06 ± 0.01	0.004 ± 0.003	0.104 ± 0.014

All fuels could be analyzed with a very high precision. A sulfur content of 1000 ppm could easily be differentiated from the background value. For even higher sensitivity IR-detection can be applied for SO<sub>2</sub>.

The vario EL cube is very suitable for liquid fuel analyses in its standard set-up. Alternatively, automatic or manual direct liquid injection devices are available.



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