

CHNS analysis in oil with the vario MACRO cube*Task*

CHNS determinations in oil are part of the standard methods when it comes to determine the quality of petrochemical products. Using the newly designed vario MACRO cube CHNS analysis can be performed on solid and liquid samples with a high precision.

Instrument	Sample
Basis: vario MACRO cube	Quantity: 40 mg
Mode: CHNS	Consistency: liquid
Periphery: capsule press	Preparation: not necessary

Specification

The samples have been filled into 0.1 ml tin capsules.

Procedure

All samples have been measured three times. The average CHNS contents and corresponding absolute standard deviations are given below.

Sample	C [%]	H [%]	N [%]	S [%]
oil-1	86.3 ± 0.30	13.4 ± 0.029	0.054 ± 0.008	0.13 ± 0.018
oil-2	84.9 ± 0.27	12.9 ± 0.020	0.074 ± 0.004	1.47 ± 0.022

Results

The CHNS content in both oil samples could be determined with a very high precision. By filling liquid samples in tin capsules CHNS analysis can be performed on the vario MACRO cube in its standard set-up. No hard- or software changes have to be done between the analysis of solid and liquid samples.

Optionally, *Elementar* also offers the vario liquid sampler (VLS) for users only interested in the analysis of liquids.

The vario MACRO cube is very well suited for applications in the petrochemical industry.