

DATA BULLETIN



Analysis of pure chemicals with extraordinary elemental composition

Some pure chemicals contain extraordinary elemental ratios. For the analysis of these compounds, the temperature programmed desorption (TPD) of the vario MICRO cube shows its strengths. The accuracy and precision of the results is ensured through the guaranteed baseline separation of the peaks.

The samples are directly weighed into tin boats and analyzed using a standard method.

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

INSTRUMENT:

vario MICRO cube

DETAILS:

mode: CHNS

sample: 1 – 2 mg pure chemicals

SAMPLE		C [%]	H [%]	N [%]	S [%]
melamine	theory	28.57	4.79	66.67	
	analysis	28.5 ± 0.05	4.75 ± 0.05	66.4 ± 0.14	
bismuthiol	theory	15.99	1.34	18.64	64.03
	analysis	16.1 ± 0.05	1.33 ± 0.01	18.6 ± 0.06	64.2 ± 0.12
stearic acid	theory	76.0	12.75	-	-
	analysis	76.0 ± 0.03	12.6 ± 0.02	-	-
anthracene	theory	94.34	5.66	-	-
	analysis	94.1 ± 0.14	5.67 ± 0.02	-	-



The results show that samples with extraordinary elemental ratios can be analyzed with the vario MICRO cube without problems.

Within the specified range of concentrations no peak overlap occurs, which would disturb the integration. Even extremely small peaks next to large peaks can be separated from each other using the temperature programmed desorption of the vario MICRO cube.

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