

# DATA BULLETIN

## Analysis of fluorinated samples with the vario MICRO cube

The frequent analysis of highly fluorinated samples is a common problem for the elemental analysis. The vario MICRO cube is specially designed for these kinds of samples, which leads to good results.

The samples were weighed in silver boats and analyzed immediately. After two standard samples, the fluorinated compounds were measured. Afterwards unfluorinated samples were measured again.

### INSTRUMENT:

vario MICRO cube

### DETAILS:

mode: CHNS

sample: 2 mg fluorinated samples

SAMPLE (n = 6)	C [%]	H [%]	N [%]	S [%]
<b>sulfanilamide</b> difference to theory	42.1 ± 0.09 +0.27	4.67 ± 0.01 +0.02	16.3 ± 0.03 +0.03	18.7 ± 0.03 +0.06
<b>sulfanilic acid</b> difference to theory	41.5 ± 0.16 -0.15	4.03 ± 0.03 -0.04	8.14 ± 0.03 +0.05	18.4 ± 0.14 -0.08
<b>N-F-dibenzosulfonimide</b> difference to theory	45.6 ± 0.08 -0.09	3.19 ± 0.01 -0.01	4.47 ± 0.01 +0.03	20.3 ± 0.11 -0.01
<b>fluor-benzoic acid</b> difference to theory	60.1 ± 0.18 +0.13	3.62 ± 0.02 +0.02	-	-
<b>N-F-dibenzosulfonimide</b> difference to theory	45.7 ± 0.07 -0.06	3.20 ± 0.01 +0.00	4.46 ± 0.01 +0.02	20.2 ± 0.20 -0.13
<b>trifluoracetanilide</b> difference to theory	50.6 ± 0.32 -0.18	3.27 ± 0.02 +0.07	7.36 ± 0.05 -0.05	-
<b>sulfanilamide</b> difference to theory	42.0 ± 0.02 +0.19	4.68 ± 0.01 +0.03	16.3 ± 0.01 +0.01	18.5 ± 0.17 -0.08
<b>sulfanilic acid</b> difference to theory	41.8 ± 0.05 +0.18	4.08 ± 0.02 +0.01	8.24 ± 0.02 +0.15	18.6 ± 0.20 +0.12



These data show some remarkable properties of the vario MICRO cube. On the one hand, the fluorinated samples are analyzed with high precision. On the other hand, subsequently analyzed unfluorinated samples are not influenced; no changes in measurement characteristics are detectable. The instrument shows good results and the relative standard deviation stays low.

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