

C, H, S determination in oil samples



Suitable analyzers

- CHS-580 series

Used accessories

- Porcelain boats (88600-0011)
- Suitable calibration material (NIST or other)
- Quartz sand (90840)

Settings

- Furnace temperature: 1150 °C
- Comparator level: 5 mV
- Minimum analysis time: 70 sec
- Maximum analysis time: 180 sec



Resistance furnace

Sample preparation

For best results preheat the 88600-0011 crucibles at 1000 °C for at least 1 h. Quartz sand 90840 should be dried at 105 °C for 1 h.

Procedure

- Prepare the ELTRA analyzer (e.g. change anhydrous, sodium hydroxide), check the combustion tube if it is clean.
- Run three warm up samples (f.e. oil). Place approx. 0.6 g of 90840 quartz sand in the middle of the combustion boat. Drop the oil sample on the sand (a pipettor could be useful) and cover the oil spot again with 0.1 g of quartz sand.
- Run three times calibration material (NIST or other) according to the warm up procedure. Calibrate the analyzer as described in the manual.

-> Now start with the actual analysis.

Typical results

AR 2941			
Weight (mg)	% C	% H	% S
53.3	83.02	12.85	0.0101
53.7	83.40	12.89	0.0094
58	82.91	12.87	0.0104
56.7	83.02	13.06	0.0095
55.4	83.70	12.88	0.0080
55.1	83.65	12.91	0.0094
52.2	83.13	12.89	0.0110
58.3	84.25	12.95	0.0090
53.1	83.23	12.78	0.0086
51.3	83.18	12.77	0.0093
Average values			
	83.35	12.88	0.0095
Deviation			
	0.41	0.08	0.0009