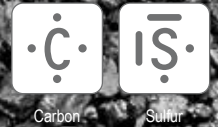


# C, S determination in coal samples



### Suitable analyzers

- CS-580 series
- CS-2000 (resistance furnace)

### Used accessories

- Disposable porcelain boats (90160)
- Suitable calibration material (NIST or other)

### Settings

- Furnace temperature: 1350 °C
- Comparator level: 20 mV
- Minimum analysis time: 60 sec
- Maximum analysis time: 180 sec



Resistance furnace



**CS-580 series**



**CS-2000 (resistance furnace)**

### Sample preparation

For best results grind the sample down to a particle size of approx. 200 µm. Dry the sample to constant mass at 105 °C (at least 1 hour).

### Procedure

- Prepare and clean the ELTRA analyzer (e.g. exchange anhydron, sodium hydroxide) and set the furnace temperature to 1350 °C
- Run at least three warm up samples (e.g. ELTRA 92511-3020) with a medium sample weight of 200 mg until the results are consistent
- Calibrate the system with a suitable calibration material (NIST or other):
  - (1) Weigh in 200 mg of sample in a porcelain boat (90160)
  - (2) Start analysis (F5 Button)
  - (3) Load the sample into the furnace and wait until the PC calculates results

Repeat step (1) – (3) at least three times;  
Mark the results and use the calibration function in the software

-> **Now start with the actual analysis.**

Typical results	
Coal (customer sample)	
% C	% S
85.63	4.63
85.82	4.67
85.65	4.68
85.63	4.66
85.86	4.64
86.22	4.68
85.57	4.71
85.60	4.65
86.19	4.69
85.34	4.62
84.59	4.65
85.39	4.63
85.62	4.66
85.25	4.70
85.43	4.67
Average values	
85.59	4.66
Deviation	
0.391 / 0.45 %	0.03 / 0.55%

Subject to technical modification and errors