



(CHN) in Coal

ASTM# D5373

Instrumental determination of Carbon, Hydrogen and Nitrogen in laboratory samples of coal

Instrumental determination of Carbon, Hydrogen and Nitrogen in laboratory samples of coal was performed in line with ASTM D5373.

Coal sample amount between $0.5 \div 9.0$ mg at 75 micron as mesh size was put in 5x9mm tin cup allowing several hundreds of analyses performed without the need to remove ashes. The Instrument is based on Patented TurboFlash™ Combustion Technology synchronizing samples admission with pressurized oxygen injection independently from Helium carrier gas: a wide viewing mirror, located in the AutoSampler, shows the brighter combustion temperature exceeding 1800°C at flash point generating a gas mixture of N_2 , CO_2 , H_2O .

Weaver^{NET} is the the most complete software dedicated to Elemental Analysis tailor-made for EuroVector Elemental Analyser. Ease of use, graphic tools review, fine inspection of integrated chromatograms are supported by elegant functionalities. Weaver^{NET} supervises full automatic instrument control from parameters downloading up to results printout. It also allows for data re-processing, preventive maintenance prompting, gas leak test and full diagnostic.

Results are presented in user pre-selected report format.

| INSTRUMENTATION | SAMPLE |
|------------------------------------|--|
| EA3100 - CHN analysis time: 3 min. | Coal - 75 micron mesh size |
| Calibration Std: Acetanilide | Weight: $0.5 \div 6.0$ mg in 5 x 9 mm tin cups |





Expected Coal ranges are reported on the table here below:

TYPICAL RESULTS (3 REPLICATES)

| SAMPLE | N% | C% | H% |
|-----------|-------|--------|-------|
| Coal | 1.441 | 75.953 | 5.051 |
| Coal | 1.437 | 75.984 | 5.045 |
| Coal | 1.440 | 76.074 | 5.028 |
| Average | 1.439 | 76.004 | 5.041 |
| Std. Dev. | 0.002 | 0.063 | 0.012 |

Acetanilide was used for calibration with results shown in pre-selected report format.

EA3100 Series results show full compliance with ASTM D 5373. Standard Deviation is well within the limits set by the standard method.

EuroVector maintains expertise on customer's applications for analytical support: the most representative samples have been grouped as "Samples by Category" providing a series of Application notes for each category.



Biomass,
Biofuel,
Wastes



Soils,
Sediments,
Rocks



Plants,
Branches
leaves,
Roots,
Vegetables



Food, Feed
Oil seeds,
Sunflowers,
Cereals,
Corn,
Brewing malt...



Coal,
Coke,
Peat



Petroleum,
Lubricants



Organics,
Synthetic,
Compounds,
Polymers
textiles,
Pharma,
Fertilizers