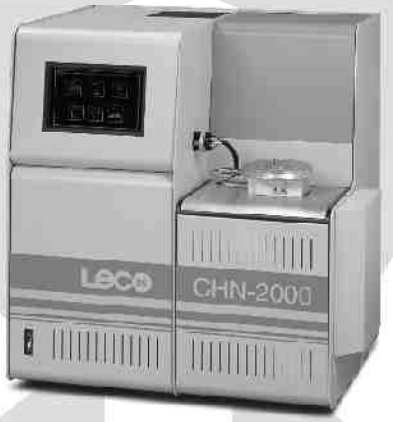
# Organic Application Note

## Carbon, Hydrogen, and Nitrogen in Coke




***Accessories*** 502-186 Tin Foil Cup

***Calibration Standard*** NIST, BCR or other suitable material

***Sample Weight*** 0.07 to 0.09 g

***Analysis Time*** 7 minutes

***Furnace Temperature*** 950°C

### *Flow Profile*

| # | *Oxygen Flow* | *Time* |
|---|---|---|
| 1 | Low | 15 |
| 2 | Low | 15 |
| 3 | Low | 15 |
| 4 | Medium | 15 |
| 5 | Medium | END |

### *Procedure*

1. Prepare the instrument by following the procedure as outlined in the operator's instruction manual (perform any required maintenance, perform leak checks, etc.).
2. Analyze gas blanks until instrument is stable. Reset the blank if necessary.
3. Switch to the above flow profile.
3. Analyze three to five 502-186 Tin Foil Cups containing ~0.07 to 0.09 g standard material and drift correct.
4. Weigh unknown sample into a 502-186 Tin Foil Cup, seal, load into carousel, and analyze.

### *Typical Results*

| *Sample* | *% Carbon* | *% Hydrogen* | *% Nitrogen* |
|---|---|---|---|
| Coke | 88.94 | 0.96 | 1.74 |
| | 89.04 | 0.95 | 1.72 |
| | 88.70 | 0.94 | 1.76 |
| | 88.53 | 0.94 | 1.71 |
| | 89.16 | 0.95 | 1.71 |
| | 88.80 | 0.94 | 1.71 |
| | 89.07 | 0.94 | 1.71 |
| | 88.48 | 0.92 | 1.70 |
| | 88.45 | 0.94 | 1.71 |
| | 88.43 | 0.93 | 1.71 |
| | 88.43 | 0.93 | 1.72 |
| **Average** | **88.73** | **0.94** | **1.72** |
| **Std. Dev.** | **0.28** | **0.011** | **0.019** |

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