

# Organic Application Note

## Sulfur in Oils

### Accessories

529-204 Crucibles, 502-301 Tungsten Trioxide or 502-321 COM-CAT™ accelerator, eye droppers, or disposable pipettes

**Sample Weight** 0.09 to 0.12 g

### Calibration Standard

NIST or other LECO suitable material

**Furnace Temperature** 1350°C

**Analysis Time** 60 to 300 seconds (Sulfur)

**Comparator Level** 1% (Sulfur)

### Notes

- If the sample soots (indicated by a darkening of the anhydrous in the primary anhydrous tube), then a high bias of the results is possible. To overcome sooting, add ~3 g of 501-426 COM-AID on top of the ~1 g of Tungsten Trioxide to cover the sample.
- 502-321 COM-CAT can be substituted for 502-301 Tungsten Trioxide.

### Procedure

1. Prepare instrument as outlined in the operator manual.
2. Condition the instrument by analyzing a few coal samples, until the readings are stable.
3. Calibrate the system by analyzing at least three replicates of the standard used, using the following procedure.
  - a. Using an eyedropper, weigh ~0.1 g of sample into a 529-204 Crucible containing ~1 g 502-301 Tungsten Trioxide or 502-321 COM-CAT.
  - b. Click the mouse on Analyze. When the "load furnace" message appears on screen, slide the sample into the combustion tube.
4. Analyze unknown samples following steps 3a and 3b.

### Typical Results

Sample	Weight (g)	% Sulfur	Weight (g)	% Sulfur
501-099 LECO	0.1137	4.03	0.1137	3.98
Paraffin Oil	0.1159	4.04	0.1167	4.04
	0.1020	4.02	0.1189	4.06
	0.1049	4.07	<b>Mean</b>	<b>= 4.04</b>
	0.1165	4.03	<b>Std. Dev.</b>	<b>= 0.03</b>
	0.1185	4.10		
	0.1138	4.00		



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