

# Organic Application Note

## Sulfur in Rubber

**Accessories** 529-204 Combustion Boat Crucible, 502-321 COM-CAT™ accelerator

**Calibration Standard** Sublimed Sulfur or other suitable material

**Sample Weight** 0.05 to 0.08 g

**Analysis Time** 40 to 300 seconds (Sulfur)

**Furnace Temperature** 1350°C

**Comparator Level** 1% sulfur



### 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 using the following procedure.
  - a. Weigh 0.05 to 0.08 g of sample into a 529-204 Crucible and cover with ~1 g 502-321 COM-CAT.
  - b. Click 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	% S	Sample	Weight	% S
Rubber #1	0.0499	50.52	Rubber #3	0.0854	69.12
	0.0505	50.66		0.0815	68.98
	0.0509	50.66		0.0843	69.60
	0.0511	50.55		0.0810	69.31
	Mean	= 50.60		Mean	= 69.25
	Std. Dev.	= 0.07		Std. Dev.	= 0.27
	n	= 4		n	= 4
Rubber #2	0.0507	50.80			
	0.0546	49.85			
	0.0526	49.93			
	0.0512	49.94			
	Mean	= 50.13			
	Std. Dev.	= 0.45			
	n	= 4			



LECO Corporation • 3000 Lakeview Ave. • St. Joseph, MI 49085  
Phone 800-292-6141 • Fax 269-982-8977  
info@leco.com • www.leco.com  
ISO-9001:2000 No. FM 24045