

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
Rubber #1	0.0499	50.52
	0.0505	50.66
	0.0509	50.66
	0.0511	50.55
	Mean	= 50.60
	Std. Dev.	= 0.07
	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

Sample	Weight	% S
Rubber #3	0.0854	69.12
	0.0815	68.98
	0.0843	69.60
	0.0810	69.31
	Mean	= 69.25
	Std. Dev.	= 0.27
	n	= 4



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