

# Organic Application Note

## Sulfur in Plant Tissue

**Accessories** 529-204 Crucibles, 502-321 COM-CAT™ accelerator

**Calibration Standard** NIST or other suitable material

**Sample Weight** ~0.25 g

**Analysis Time** 90 to 300 seconds

**Furnace Temperature** 1350°C

**Comparator Level** Sulfur: 1%



### Sample Preparation

Sample should be of uniform consistency and dried at 85°C for two hours prior to analysis.

### Procedure

1. Prepare instrument as outlined in the operator manual (perform maintenance, leak checks, etc.).
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. Weigh ~0.25 g of sample into a 529-204 Crucible and mix well with ~1 g 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	Sample	Weight (g)	% Sulfur
502-273 Alfalfa (0.292 ±0.008)	0.2616	0.290	502-082 Tobacco (0.60 ±0.03)	0.2482	0.599
	0.2534	0.291		0.2458	0.596
	0.2488	0.290		0.2592	0.602
	0.2543	0.292		0.2613	0.599
	0.2508	0.289		0.2437	0.598
	0.2489	0.294		0.2482	0.601
	0.2459	0.298		0.2654	0.605
	<b>Average</b>	=		<b>0.292</b>	<b>Average</b>
<b>Std. Dev.</b>	=	<b>0.003</b>	<b>Std. Dev.</b>	=	<b>0.003</b>



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