

# Organic Application Note

## Determination of Mercury in Sewage Sludge

### Sample Preparation

The dried powder samples can be weighed directly into the boat. Drying should be done at temperatures below 70°C.

### Sample Weight

Approximately 50 mg, balance precision 0.1 mg or better.

### Boat Type

614-822-114 Large Nickel Boats.

### Analysis Time

Approximately 300 seconds for a single determination. Replicates (Hg accumulation) are not necessary.

### Instrument Parameters

Drying Time:	60 seconds
Decomposition Time:	150 seconds
Waiting Time:	45 seconds

### Calibration

The instrument has been calibrated in the factory by means of Hg standard solutions. The calibration has long-term stability. Before analysis begins, it should be checked using suitable standard check samples (Hg standard solutions or BCR/NIST standards).

### Blank Correction

Prior to analysis the instrument must be purged with internal blanks until blank stability is achieved.

### Typical Results

#### Sewage Sludge, Fine Nominal Value: 6 ppm

Sample Weight (mg)	ng	ppm
44.5	263.66	5.925
46.7	281.97	6.038
43.9	258.92	5.898

Mean Value: 5.954 ppm  
 SD: 0.074 ppm  
 RSD: 1.25%

#### Sewage Sludge, Coarse Nominal Value: 6.4 ppm

Sample Weight (mg)	ng	ppm
50.8	329.52	6.487
47.3	299.03	6.322
51.4	328.55	6.392

Mean Value: 6.400 ppm  
 SD: 0.083 ppm  
 RSD: 1.29%



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