

QUALITY WORK INSTRUCTIONS (QWI) SULFUR ANALYSIS PROCEDURE VOLATILES AT 105°C

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1.0 EQUIPMENT NEEDED

Pre-dried aluminum weighing dish
Scale
Oven
Desiccator

2.0 PROCEDURE

- (1) Weigh the pre-dried aluminum-weighing dish alone.
- (2) Weigh accurately a 10-gram sulfur sample into the pre-dried aluminum-weighing dish. Record this total weight before drying.
- (3) Heat in a 105°C oven for 3 hours, then remove and cool in desiccator.
- (4) Weigh to find total weight after drying, and use the formula below to calculate % Volatiles.

$$\% \text{ Volatiles} = \frac{(\text{Total weight before drying} - \text{Total weight after drying}) \times 100}{10\text{-gram original sulfur sample weight}}$$

- (5) Place the sample in the 105°C oven for one more hour, remove and cool in desiccator.
- (6) Weigh to find total weight after drying, and use the formula above to calculate % Volatiles.
- (7) If weight has changed from before, repeat steps (5) and (6) until a constant weight is obtained.