

QUALITY WORK INSTRUCTIONS (QWI)

SULFUR ANALYSIS PROCEDURE

SULFUR SOLIDS

Document #: QWI-19

Revision #: 0

Effective Date: 12/2/09

1.0 EQUIPMENT NEEDED

Carbon disulfide
Medium porosity crucible
Crucible holder
Suction flask
Suction pump
Mortar and pestle
Oven
Desiccator

2.0 PROCEDURE

- (1) Perform Total Solids analysis and use resulting solids for this test.
- (2) Crush dried sample in mortar until almost powder.
- (3) Weigh 5 grams of resulting sulfur solids into medium porosity crucible.
- (4) **Note: Carbon disulfide is extremely flammable, avoid contact with skin.** Wash the sample with 100 ml carbon disulfide using slight suction to pull solvent through while stirring lightly.
- (5) Place the crucible in an explosion-proof oven at 80°C for fifteen minutes to dry.
- (6) Remove and cool in desiccator.
- (7) Weigh to find total weight after drying. Subtract crucible weight from total weight to find residue weight. Use the formula below to calculate % Sulfur Solids.

$$\text{Sulfur Solids \%} = \frac{\text{Weight of residue after drying} \times 100}{5\text{-gram original sample weight}}$$