10.6 Ethylene Glycol Analysis in Soil

10.6 1 Procedure

10.6.1.1

With the soil sample placed in an appropriate container, immerse the volume of soil sample with a volume of Methyl Alcohol (MeOH) that completely covers the soil sample.

10.6.1.2

Allow to sit for approximately 5 min. to extract any Ethylene Glycol which may be present.

10.6.1.3

Pour off the solution and filter with Whatman #4 filter paper into an appropriate sized beaker. The solution is concentrated to approximately 1/10th the initial liquid volume by evaporating off the MeOH.

10.6.1.4

Analyze by GC-MS using the following conditions:

- Initial Temp: 60°C
- Hold Time: None
- Ramp (Deg./min.): 15°C
- Final Temp: 250°C
- Column: DB-1 or equivalent; 15M , 0.25mm ID
- Sample Size: 0.2ul to 0.5ul

10.6.1.5

The results from the analysis of the unknown must be compared with a known Ethylene Glycol standard.