

TECHNICAL BULLETIN

Testing for Polychlorinated Biphenyls (PCBs) by HR/GC/MS using EPA Method 1668

Method Overview

Method 1668 is for the determination of the toxic polychlorinated biphenyls (PCBs) in water, soil, sediment, sludge, tissue, foodstuffs and other sample matrices by high-resolution gas chromatography/ high-resolution mass spectrometry (HRGCMS). Method 1668 is an isotope dilution analysis based on a compilation of methods including EPA method 1613, and provides an option for reporting results in terms of toxic equivalency factors. The method is for use in EPA's monitoring efforts associated with SDWA, RCRA, CERCLA, and CWA, and is the method of choice for compliance with the proposed rule 503 for the use and disposal of biosolids. Method 1668 is also utilized by the food industry to insure safe food products.

Method Detection Limits

Actual detection limits achieved by method 1668 will vary according to the sample matrix but for results to be valid, they must meet the minimum requirements of the method. For detailed information on the complete analyte list and current MDL studies please review the Method Detection Limits tables available upon request from Pace Analytical. Method Reporting Limits are as follows:

| | Soil (pg/g) | Water (pg/L) |
|---------------|-------------|--------------|
| PCB Congeners | 50 | 50 |

Method Specifications

| | |
|---------------------------------|---|
| Holding Times: | No extraction requirements Analyzed within 40 days of extraction |
| Method Turnaround (TAT): | 21 Calendar Days |
| Method QAQC: | - Labeled internal standard recoveries are continuously monitored to insure data quality and method compliance. - Lab Blanks – 1 per 20 samples. |

Method Sampling Guide

Aqueous or sludge samples for 1668 analysis should be collected in a 1 liter amber glass container with teflon (PTFE) lined lid (sludge samples of less than 80% moisture may be collected as solid samples). Solid, tissue or food samples should be collected in 4oz amber glass jars with teflon lined caps (50 gram minimum sample). Pace Analytical will provide appropriate sample containers upon request. Ship samples via overnight carrier, chilled to 4°C (39°F). Include completed chain of custody document with sample submission.