

TECHNICAL BULLETIN

Testing for 209 Polychlorinated Biphenyls (PCBs) by HR/GC/MS using EPA Method 1668A

Method Overview

Method 1668A is for the determination of all 209 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 1668A 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 on select isomers. The method is for use in EPA's monitoring efforts associated with RCRA, CERCLA, and CWA, and the food, feed and supplements industries monitoring efforts to insure safe products for human consumption.

Method Detection Limits

Actual detection limits achieved by method 1668A will vary according to the sample matrix and by isomer, given background levels and coelution factors, 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 for most isomers 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 1668A 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.