

# TECHNICAL BULLETIN

## Testing for Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by HR/GC/MS EPA Method 8290

### Method Overview

This SW846 method provides procedures for the detection and quantitative measurement of (7) polychlorinated dibenzo-p-dioxins and (10) polychlorinated dibenzofurans (tetra through octa) in a variety of environmental matrices including: solid, aqueous, ash, biota, etc. The analysis calls for the use of high-resolution gas chromatography/ high-resolution mass spectrometry (HRGCMS) on purified sample extracts and provides an option for reporting the analytical results in terms of the toxic equivalency factors. Method 8290 is normally utilized in conjunction with RCRA regulatory action in support of remediation activities at contaminated environmental sites.

### Method Detection Limits

Actual detection limits achieved by method 8290 will vary according to the sample matrix and by homologue group but to be considered valid, must meet the requirements of the method. For detailed information on the complete analyte list and current MDL studies please review the Method Detection Limits available upon request from Pace Analytical. Method Reporting Limits are:

Homologue Group	Soil (pg/g)	Water (pg/L)
Tetra	1	10
Penta, Hepta, Hexa	5	50
Octa	10	100

### Method Specifications

<b>Holding Times:</b>	Extracted within 30 days Analyzed within 45 days
<b>Method Turnaround (TAT):</b>	21 Calendar Days
<b>Method QAQC:</b>	- Labeled internal standard recoveries are continuously monitored to insure data quality and method compliance. - Lab Blanks – 1 per 20 samples.

### Method Sampling Guide

Aqueous samples for 8290 analysis should be collected in (2) 1 liter amber glass containers with teflon (PTFE) lined lids. If residual chlorine is present preserve with 80g Sodium Thiosulfate. Solid samples should be collected in 4oz glass jars with teflon lined caps (50gm 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.

### Method Notes

Method 8290 hold times indicated above are recommendations only.